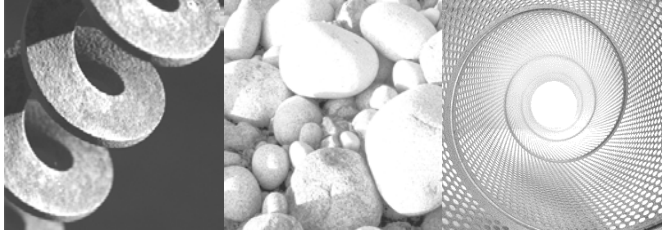

GEI Consultants

Consulting
Engineers and
Scientists

MassDEP RTN 3-23246

Phase V Status Report No. 25 and Remedial Monitoring Report No. 40

50 Tufts Street, Somerville, Massachusetts

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Acronyms and Abbreviations

µg/L	micrograms per liter
AUL	Activity and Use Limitation
CEP	Critical Exposure Pathway
COPC	Compounds of Potential Concern
CRA	Comprehensive Remedial Action
CSA	Comprehensive Site Assessment
DNAPL	dense non-aqueous phase liquid
EPA	U.S. Environmental Protection Agency
EPMM	Exposure Pathway Mitigation Measure
FIR	Final Inspection Report
GEI	GEI Consultants, Inc.
GLX	Green Line Extension
IH	Imminent Hazard
IRA	Immediate Response Action
lbs	pounds
LQG	Large Quantity Generator
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MBTA	Massachusetts Bay Transportation Authority
MCP	Massachusetts Contingency Plan
MNA	Monitored Natural Attenuation
NAPL	non-aqueous phase liquid
NSR	No Significant Risk
OHM	oil and/or hazardous material
OMM	Operation, Maintenance, and Monitoring
PCE	tetrachloroethylene (perchloroethylene)
PSS	Permanent Solution Statement
RAM	Release Abatement Measure
RAO	Response Action Outcome
RAP	Remedial Action Plan
RIP	Remedy Implementation Plan
RMR	Remedial Monitoring Report
ROS	Remedy Operations Status
RTN	Release Tracking Number
SHE	Substantial Hazard Evaluation
SSDS	sub-slab depressurization system
SVE	soil vapor extraction
TCA	1,1,1-trichloroethane
TCE	trichloroethylene
VOC	volatile organic compound

Executive Summary

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. (GEI) prepared this Phase V Status Report No. 25 and Remedial Monitoring Report (RMR) No. 40 for the site located at 50 Tufts Street in Somerville, Massachusetts (the Site). The Site is identified by Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-23246. The Site includes the 50 Tufts Street property (the Property), other properties in the neighborhoods east and immediately north, south, and west of the Property, and the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts. The Site has been in Remedy Operation Status (ROS) for approximately 11 years. This Phase V Status Report No. 25 covers the period from June 16, 2023 to December 15, 2023.

Background

From approximately 1955 to 2002, the Property was used for storage and distribution of industrial chemicals, laundry supplies, and dry-cleaning supplies. Chemicals stored at, and transported to and from the Property, included chlorinated volatile organic compounds (VOCs). These chlorinated VOCs – particularly tetrachloroethylene (also called perchloroethylene [PCE]), trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA) – have been detected in soil, soil vapor, indoor air, and groundwater at the Property and are therefore the compounds of potential concern (COPCs) for the Site. In some buildings within the Site, chlorinated VOCs have been detected in indoor air samples.

The detection of chlorinated VOCs in indoor air at some buildings required the implementation of an Immediate Response Action (IRA). The "Immediate Response Action Plan" associated with RTN 3-23246 was submitted to MassDEP on January 9, 2006. The Site was classified as Tier IC (Permit No. W085813). The "Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP)" (Phase II/III) for the Site was submitted to MassDEP on July 14, 2008. The "Phase IV Remedy Implementation Plan" (Phase IV RIP) was submitted to MassDEP on August 10, 2009. The "Immediate Response Action Completion Report and Remedial Monitoring Report No. 11" (IRAC Report) was submitted to MassDEP on November 13, 2009, and the "Immediate Response Action Completion Report Amendment" (IRAC Report Amendment) was submitted to MassDEP on April 1, 2011. The "Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report" (Phase IV FIR/Phase V ROS) was submitted to MassDEP on August 4, 2011. The Site was reclassified as Tier II on August 1, 2014.

The remedial action alternative (RAA) selected by the Phase III evaluation included:

1. Installing Exposure Pathway Mitigation Measures (EPMMs) to the extent feasible (e.g. vapor barrier and venting system, or sub-slab depressurization systems [SSDSs]), and recording Activity and Use Limitations (AULs) as appropriate, for residences where the soil vapor migration pathway to indoor air has been confirmed, and installing EPMMs in occupied commercial buildings to reduce chlorinated VOC concentrations in indoor air to that which constitutes a condition of No Significant Risk (NSR).
2. Continuing to operate the soil vapor extraction (SVE) system at the Property to remove COPCs from the vadose zone.
3. Conducting a Site-wide Monitored Natural Attenuation (MNA) program to evaluate overburden and bedrock groundwater plume concentrations over time to assess the rate of natural attenuation processes, and to confirm that groundwater concentrations of chlorinated VOCs are generally stable or decreasing.

The Phase IV FIR/Phase V ROS documented that construction and implementation of the Comprehensive Response Action (CRA) has been completed; and additional activities, such as operation and monitoring of active remedial systems, will be conducted under Phase V ROS.

In accordance with the MCP, particularly 310 CMR 40.0892, this Phase V Status Report No. 25 and RMR No. 40 includes the following information regarding the remedial actions being conducted at the Site:

- A description of the type and frequency of operation, maintenance, and/or monitoring (OMM) activities.
- A description of any significant modifications made to the OMM activities since the last reporting period.
- An evaluation of the performance of the remedial action during the reporting period, including whether the remedial action is achieving remedial goals specified in the Phase IV RIP as described in 310 CMR 40.0874(3), and a description of any conditions or problems identified through OMM activities during the reporting period that are, or may be, affecting the performance of the remedial action.
- A description of the measures taken to address any conditions or problems identified through OMM activities during the reporting period.
- The name, license number, signature and seal of the LSP.

Following is a summary of OMM activities conducted at the Site to date:

Capuano Center

An SSDS is installed in the east wing of the Capuano Center. In addition, GEI sealed certain slab/wall joints at the Capuano Center to mitigate a potential preferred migration pathway. GEI conducted 24 rounds of indoor air sampling after the SSDS was installed in February 2007. The soil vapor migration pathway to indoor air has been eliminated and a condition of NSR has been achieved for occupants of the Capuano Center. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP and has achieved the remedial objectives.

The system currently includes three radon fans on dedicated discharge pipes for each collection header extending above the roofline. Remote telemetry sensors are installed on the system. GEI performed post-modification indoor air sampling on May 23 and 24, 2015. VOCs were not detected above laboratory reporting limits during the indoor air sampling, indicating that the system as modified continues to meet the remedial objectives.

GEI will continue to inspect and maintain the system and continue operation and monitoring under ROS.

Residential and Commercial Properties

As part of the IRA, while Site conditions were still under investigation, GEI took timely action to evaluate and implement measures to eliminate or mitigate Critical Exposure Pathways (CEPs) to the extent feasible. The feasibility of such measures was determined by physical conditions, including the suitability of each property to installation of active or passive vapor controls, and by amenability of property owners to provide legal access. Mitigative measures were initially implemented as IRA activities. The Phase II/Phase III assessment and evaluation of RAAs included response actions to address CEPs as part of the recommended CRA. With the submittal of the Phase IV RIP, the IRA addressing CEPs was closed with an IRAC Report and an IRAC Report Amendment. In accordance with the MCP (310 CMR 40.0427), "mitigation of Critical Exposure Pathway(s) is continuing by incorporation of ongoing response actions to address the Critical Exposure Pathway(s) into the Phase IV Remedy Implementation Plan for the disposal site." Following the submittal of the IRAC Report and IRAC Report Amendment, therefore, all further response actions, including mitigation of any CEPs at the Site, have been conducted in accordance with the Phase IV RIP. Construction and implementation of the CRA has been completed. OMM activities, including operation of active remedial systems and active EPMMs (AEPMMs), continue to be conducted under Phase V ROS or are being implemented as Partial Permanent Solutions Statements (PSSs) with Conditions.

Following is a summary of activities conducted and results obtained with respect to EPMMs through December 15, 2023:

- EPMMs have been installed in 23 residential and commercial properties, not including the EPMMs installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center. One EPMM (at 103 Washington Street) was removed as part of redevelopment when the building was vacant and demolished. Additionally, an EPMM has been installed in a new multi-family development at 31 Tufts Street and efficacy testing has been completed. The EPMM at 10 Morton Street has been temporarily removed during building renovation activities. Accordingly, there are currently 22 installed EPMMs at the Site. The results of post-EPMM installation indoor air sampling indicate that the remaining 22 EPMMs have achieved the remedial objectives.
- The property at 103 Washington Street is being redeveloped as a mixed-use building with commercial space and open-air parking on the first floor and residential units above. As of December 2023, the new building at 103 Washington Street is in the final stages of construction with only the interior finishes and exterior landscaping/paving to be completed. GEI has started conducting a vapor intrusion evaluation at the property.
- The property at 105 Washington Street has been redeveloped as a mixed-use building with commercial space and open-air parking on the first floor and residential units above. Construction activities were completed in June 2022, and the building is occupied. An EPMM was not installed. GEI conducted indoor air and sub-slab soil vapor sampling at 105 Washington Street in March 2022, February 2023, and May 2023. The sampling results indicated that the vapor intrusion pathway is unlikely to be of concern under current and future conditions. Additional sampling is not planned for 105 Washington Street.
- The property at 31 Tufts Street, formerly a paved parking lot, is being redeveloped with multi-family housing. The development is a three-story residential apartment building with surface parking and public open space. MassDEP assigned RTN 3-37468 to the 31 Tufts Street property based on concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals exceeding the applicable MassDEP reportable concentrations in soil (RCS-1) standards. These conditions are not attributable to the 50 Tufts Street Site. On July 25, 2022, GEI submitted a RAM Plan on behalf of the owners for response actions associated with construction, including soil management and installation of a vapor barrier and a sub-slab ventilation piping network beneath the building. In September 2022, GEI observed the installation of a vapor barrier and a sub slab ventilation piping network beneath the building. In October 2022, GEI observed a smoke test to confirm barrier integrity. GEI conducted indoor air and sub-slab soil vapor sampling at 31 Tufts Street in October 2023.

The sampling results indicated that the vapor intrusion pathway is unlikely to be of concern under current and future conditions. On December 5, 2023, GEI submitted a RAM Completion Report and Permanent Solution Statement for RTN 3-37468. GEI will continue coordinating with the owner and developer of the property to continue performing the vapor intrusion evaluation at the property, which will be incorporated as part of the ROS.

- The property at 121 Washington Street is being redeveloped into residential apartment units. A small commercial building that formerly occupied the property and was demolished in 2020. As of December 2023, the framework and construction of the exterior walls have been completed. GEI is coordinating with the owner and developer of the property to incorporate vapor mitigation components into the building construction.
- GEI conducted twelve EPMM inspections during this reporting period in the months of January and March 2023. GEI was unable to access several of the residential properties but will continue its attempts to obtain access for EPMM inspections at these properties during the next reporting period.
- ARCADIS U.S., Inc. (ARCADIS) prepared an Updated 2015 Method 3 Risk Characterization, which incorporated updated soil, groundwater, and indoor air data sets, and included updated MassDEP toxicity information, particularly for PCE and TCE. Based on the Updated 2015 Method 3 Risk Characterization, the performance of individual EPMMs, and a review of indoor air sampling results for samples collected since the Updated 2015 Method 3 Risk Characterization, a condition of NSR exists for current and future building occupants at each property within the Site.
- A Permanent Solution with Conditions Statement will be submitted for each property with an active or passive EPMM, where the EPMM has achieved the remedial objectives, an AUL has been recorded for the property, and sufficient post-EPMM indoor air sampling has been conducted. The filing of a Partial PSS with Conditions for an individual property documents the achievement of regulatory closure under the MCP for that property. Therefore, the Phase V provisions will not apply to properties for which a Partial PSS with Conditions has been submitted. During the reporting period, a Partial PSS without Conditions was submitted for 152-154 Glen Street.

60 Tufts Street

An SSDS has been installed in the 17-unit condominium building at 60 Tufts Street. The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS provides sufficient coverage to be protective. Indoor air testing results indicate that a condition of NSR has been achieved for building occupants at 60 Tufts Street. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP and has achieved the remedial objectives.

Remote telemetry was installed on the system on July 24, 2015. GEI will continue to inspect and maintain the system. GEI monitors parameters and sub-slab conditions for the system (e.g., flow rate, vacuum) at the headers on a quarterly basis. GEI will continue operation and monitoring of the SSDS at 60 Tufts Street under ROS.

Based on pre-EPMM indoor air testing at 60 Tufts Street, and changes to the toxicological characteristics for PCE, the AEPMM may not be required to maintain a condition of NSR. GEI has communicated with the owners and occupants of 60 Tufts Street, who are amenable to EPMM closure indoor air testing. In accordance with MassDEP's 2016 VI Guidance, GEI has initiated a closure indoor air testing program at 60 Tufts Street. However, this testing was suspended during the COVID-19 pandemic. The unit GEI had been testing was sold and GEI has not been able to make contact with the new owner.

50 Tufts Street Property

An SSDS and an SVE system have been installed at the Property. The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS provides sufficient coverage to be protective. The building is currently occupied by several tenants. Based on indoor air testing results collected since the combined system has been in operation, a condition of NSR has been achieved for the building at the Property for full-time commercial workers. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP and has achieved the remedial objectives. GEI will continue operation and monitoring of the combined SSDS/ SVE system at 50 Tufts Street under ROS.

Remote telemetry was installed on the 50 Tufts Street system on April 14, 2015. The telemetry system at 50 Tufts Street consists of a wireless remote monitoring hub that receives telemetry notification from the other AEPMMs throughout the Site. GEI monitors parameters and sub-slab conditions for the system (e.g., flow rate, vacuum, off-gas treatment efficiency) quarterly, and monitors for off-gas treatment efficiency monthly.

The combined SSDS/SVE system installed at the Property serves to protect indoor air quality and to remove source material from the vadose zone below and around the building. Monitoring data from both the SSDS and SVE components through December 15, 2023 show that approximately 9,410 lbs of VOCs have been removed from the vadose zone at the Property. GEI will continue operation and monitoring of the combined SSDS/SVE system at 50 Tufts Street under ROS.

Future Activities and Impact of 2014 MCP Amendments for AEPMMs

Current MCP requirements for AEPMMs implemented to meet the conditions for ROS (310 CMR 40.1026), include an operating regime for the active system and remote monitoring and automatic notification in the event of system failure. Operating regimes for active systems at

the Site were included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011 and included an OMM plan for the active systems.

The MCP requires that remote telemetry provide the owner and operator of the building and MassDEP notification upon failure of the system. Remote telemetry has been installed at each property with an AEPMM including the Capuano Center, except for 9 Knowlton Street. The owner of 9 Knowlton Street has been unresponsive to telemetry access request letters, telephone calls, and property visits. Therefore, it is currently infeasible to install telemetry at this property.

Upcoming MCP changes include several revisions to the telemetry reporting requirements. GEI has retained Integrasense to evaluate any necessary system modifications, and to support system maintenance, that may be required prior to filing a permanent solution for the Site, or future Partial Permanent Solutions with Conditions requiring continued operation of an AEPMM.

Tufts Street Reconstruction Project

The City of Somerville is in the planning stages to reconstruct the Tufts Street sidewalks and roadway. Several virtual and in-person community outreach meetings have been held during the previous reporting period on August 30 (virtual), September 12 (in-person), October 11 (virtual), October 17 (in-person), and October 19 (in-person). A GEI representative attended both the virtual and in-person community meetings to evaluate the potential impacts the disposal site may have on future reconstruction of the roadway and sidewalks. GEI has met with and will continue to coordinate with the City of Somerville prior to the commencement of reconstruction activities anticipated in spring 2024.

GLX Project

The MBTA, through its contractor GLX Constructors, has substantially completed work to extend MBTA Green Line service to Union Square in Somerville and beyond to College Avenue in Medford. This Green Line Extension (GLX) Project includes significant infrastructure improvements near the Site, including a new pump station, reconstruction of the bridge passing over Washington Street, new train tracks within the MBTA right-of-way (ROW), a new train station, and utility improvements.

The MBTA, GLX Constructors, and their contractors have initiated three Release Tracking Numbers (RTNs) related to construction activities undertaken at the Site:

- RTN 3-30620: A Special Project Designation (SPD) for the entire project.
- RTN 3-35528: A Utility-related Abatement Measure (URAM) for managing potentially contaminated soil and groundwater associated with installing a stormwater conveyance system within and adjacent to the MBTA ROW, and the demolition and replacement of the existing Washington Street Pump Station.

- RTN 3-34742: A Release Abatement Measure (RAM) for management of CVOC impacted soil encountered during GLX Project activities within Site boundaries.

GEI has not been provided with timely information concerning project plans, field work, or MCP submittals by the MBTA and GLX Constructors. GEI has reviewed and evaluated the soil characterization and groundwater data publicly available for RTNs 3-34742, 3-30620, and 3-35528, and analytical results for soil disposal pre-characterization samples collected within the MBTA ROW. The soil characterization data have no impact on the previous risk characterization conclusions or remedial alternatives selected for the Site. However, upon review of the data, GEI made a minor adjustment to the Site boundary in Phase V Status Report No. 17, to include a portion of the MBTA ROW near Cross Street where very low PCE concentrations were detected in soil samples collected for construction purposes.

Monitored Natural Attenuation

GEI conducts groundwater sampling once per year at 18 monitoring wells at the Site to confirm that the overburden and bedrock groundwater plumes remain stable. Monitoring wells MW104 and SHMW2 were included in prior annual groundwater sampling events. The wells were destroyed, however, by the MBTA's contractor as part of the GLX Project. On a semi-annual basis, GEI has been monitoring concentration fluctuations in MW122, MW112A, MW121D, and MW118D. Groundwater concentrations measured at these wells have typically been within a range of fluctuation that is consistent with continuing plume stability, particularly when considered in context with prior groundwater results from all monitoring wells. Generally, results from the 18 monitoring wells sampled as part of the MNA program indicate that the groundwater plumes are stable. Concentrations of PCE and TCE in overburden monitoring well MW122 are elevated and have fluctuated over time (1,600 µg/L and 200 µg/L, respectively in November 2023 while downgradient overburden monitoring wells MW118S and MW121S remain non-detect for PCE and TCE. This suggests that the plume remains stable despite increased concentrations at MW122. MW122 is adjacent to 97 Franklin Street. While historic soil vapor and indoor air monitoring at the property did not warrant the installation of an EPMM, GEI has attempted to contact the homeowner at 97 Franklin Street via certified letter and in-person for access to the property to return and conduct soil vapor and indoor air monitoring at the residence several times and they have yet to respond.

GEI will perform additional groundwater sampling in April 2024.

Remedial Monitoring Report No. 40

Remedial Monitoring Report No. 40, documenting OMM activities of active remedial systems at the Site, is presented in the BWSC-108A and 108B Transmittal Forms in Appendix A.

1. Introduction

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. (GEI) prepared this Phase V Status Report No. 25 and Remedial Monitoring Report (RMR) No. 40 for the site located at 50 Tufts Street in Somerville, Massachusetts (the Site; Fig. 1-1). The Site is identified by Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-23246. The Site includes the 50 Tufts Street property (the Property), other properties in the neighborhoods east and immediately north, south, and west of the Property, and the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts (Fig. 1-2). The Site has been in Remedy Operation Status (ROS) for approximately 11 years. This Phase V Status Report No. 25 covers the period from June 16 to December 15, 2023.

1.1 Contact Information

Entity Undertaking Response Actions
UniFirst Corporation
68 Jonspin Road
Wilmington, MA 01887

Licensed Site Professional (LSP):
Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
781-721-4012
LSP License No. 9719

Entity who will own, operate, and/or maintain the selected Remedial Action Alternative (RAA):
UniFirst Corporation
68 Jonspin Road
Wilmington, MA 01887
978-658-8888

Contact Person
Catherine Malagrida, P.G.
Environmental Compliance Manager
UniFirst Corporation
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Wilmington, MA 01887
978-658-8888 ext. 0587

1.2 Background

In 2002, a release of chlorinated volatile organic compounds (VOCs) (particularly tetrachloroethylene [also known as perchloroethylene (PCE)], trichloroethylene [TCE], and 1,1,1-trichloroethane [TCA]) to soil and groundwater at the Property was reported to the MassDEP and assigned RTN 3-23246. Three other RTNs were subsequently issued for the Site: 3-24358, 3-24376, and 3-26114. For tracking and reporting purposes, these RTNs have been consolidated under RTN 3-23246.

The detection of chlorinated VOCs in indoor air at some buildings within the Site required the implementation of an Immediate Response Action (IRA). The "Immediate Response

Action Plan" associated with RTN 3-23246 was submitted to MassDEP on January 9, 2006. The Site was classified as Tier IC (Permit No. W085813). The "Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP)" (Phase II/III) for the Site was submitted to MassDEP on July 14, 2008. The "Phase IV Remedy Implementation Plan" (Phase IV RIP) was submitted to MassDEP on August 10, 2009. The "Immediate Response Action Completion Report and Remedial Monitoring Report No. 11" (IRAC Report) was submitted to MassDEP on November 13, 2009, and the "Immediate Response Action Completion Report Amendment" (IRAC Report Amendment) was submitted to MassDEP on April 1, 2011. The "Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report," (Phase IV FIR/Phase V ROS) was submitted to MassDEP on August 4, 2011. The Site was reclassified as Tier II on August 1, 2014.

The Phase II/Phase III identified the following areas of the Site requiring investigation and mitigation:

- The Property;
- The Capuano Center;
- 60 Tufts Street, a 17-unit condominium building north of the Property; and
- Certain residences and commercial buildings located near the Property.

The RAA selected by the Phase III was:

1. Installing Exposure Pathway Mitigation Measures (EPMMs) to the extent feasible (e.g. vapor barrier and venting system, or sub-slab depressurization systems [SSDSs]), and recording Activity and Use Limitations (AULs) as appropriate, for residences where the soil vapor migration pathway to indoor air has been confirmed, and installing EPMMs in occupied commercial buildings to reduce chlorinated VOC concentrations in indoor air to that which constitutes a condition of No Significant Risk (NSR).
2. Continuing to operate the soil vapor extraction (SVE) system at the Property to remove compounds of potential concern (COPCs) from the vadose zone.
3. Conducting a Site-wide Monitored Natural Attenuation (MNA) program to evaluate overburden and bedrock groundwater plume concentrations over time to assess the rate of natural attenuation processes, and to confirm that groundwater concentrations of chlorinated VOCs are generally stable or decreasing.

As part of the IRA, while Site conditions were still under investigation, GEI took timely action to evaluate and implement measures to eliminate or mitigate Critical Exposure Pathways (CEPs) to the extent feasible. The feasibility of such measures was determined by physical conditions, including the suitability of each property to installation of active or

passive vapor controls, and by amenability of property owners to provide legal access. Mitigative measures were initially implemented as IRA activities. The Phase II/Phase III assessment and evaluation of RAAs included response actions to address CEPs as part of the recommended Comprehensive Response Action (CRA). With the submittal of the Phase IV RIP, the IRA addressing CEPs was closed with an IRAC Report and IRAC Report Amendment, in accordance with the MCP, particularly 310 CMR 40.0427 ("mitigation of Critical Exposure Pathway(s) is continuing by incorporation of ongoing response actions to address the Critical Exposure Pathway(s) into the Phase IV Remedy Implementation Plan for the disposal site"). Following submittal of the IRAC Report and IRAC Report Amendment, all further response actions were continued under Phase IV and Phase V.

The CRA for the Site includes continued active operation and maintenance of the existing commercial and residential EPMMs, and the SSDS and SVE system at the Property, to achieve a Permanent Solution pursuant to 310 CMR 40.0890. It is GEI's opinion that the Site meets the requirements for ROS in accordance with the MCP (310 CMR 40.0893[2]):

- The Phase III RAP was completed on July 14, 2008. The Phase IV RIP was completed on August 10, 2009.
- A final inspection has been performed and confirmed that the CRA has been constructed and implemented in accordance with the Phase IV RIP and is meeting projected design standards to achieve a Permanent Solution.
- Each source of oil and/or hazardous material (OHM) is controlled at the Site. Non-aqueous phase liquid (NAPL) is not visibly present at the Site. Any dense non-aqueous phase liquid (DNAPL) that may be present is not migrating and exists in a stable configuration. The Phase III demonstrated that it is not feasible to eliminate DNAPL at the Site. The dissolved-phase groundwater plumes and vapor plumes are stable and are not causing an increase in concentrations of VOCs in groundwater, soil, soil vapor, or indoor air. There are no unpermitted releases of OHM at the Site.
- Any substantial hazards have been eliminated as documented in the Substantial Hazard Evaluation (SHE) completed by ARCADIS U.S., Inc. (ARCADIS) of Chelmsford, Massachusetts in August 2011. ARCADIS also completed a Site-wide Method 3 Risk Characterization in August 2015, and GEI routinely performs Method 3 risk screening for additional indoor air data collected since 2015. Based on these risk evaluations, and based on the performance of individual EPMMs, a condition of NSR exists for current and future building occupants at each property within the Site.
- GEI has identified the longest duration of a shutdown of each active EPMM (AEPMM) that would be consistent with levels of exposure that do not pose an Imminent Hazard (IH) and poses a condition of NSR.

Construction and implementation of the CRA have been completed; additional activities, such as operation and monitoring of active remedial systems, or installation of new EPMMs, will be conducted under Phase V. The Site will operate in ROS until a Permanent Solution is achieved, except for any portions of the Site that may be closed under Partial Permanent Solution Statements (PSSs) with or without Conditions. Operating the SSDS and SVE systems, together with MNA, will ultimately achieve a Permanent Solution for the Site.

GEI will continue to conduct annual operation, maintenance, and/or monitoring (OMM) activities for installed EPMMs where sufficient indoor air sampling has been conducted, and not repeat indoor air testing, to confirm continued system effectiveness. GEI also conducts groundwater sampling and analysis as part of the MNA program.

1.3 Purpose and Scope

The Site entered Phase V with the submittal of the Phase IV FIR/Phase V ROS on August 4, 2011. In accordance with the MCP (310 CMR 40.0892), this Phase V Status Report No. 25 and RMR No. 40 includes the following information regarding the remedial actions being conducted at the Site:

- A description of the type and frequency of OMM activities.
- A description of any significant modifications made to the OMM activities since the last reporting period.
- An evaluation of the performance of the remedial action during the reporting period, including whether the remedial action is achieving remedial goals specified in the Phase IV RIP as described in 310 CMR 40.0874(3), and a description of any conditions or problems noted during the reporting period that are or may be affecting the performance of the remedial action.
- A description of the measures taken to correct any conditions or problems that may have been encountered during the reporting period.
- The name, license number, signature, and seal of the LSP.

This report covers the period from June 16 through December 15, 2023. Details of the engineering concepts, design criteria, construction plans, and specifications were previously provided to MassDEP as part of the Phase IV RIP, IRA Status Reports, RMRs, and IRA Plan Modifications and are not revisited in this report.

1.4 Public Involvement (310 CMR 40.1400)

UniFirst and GEI conducted a series of community meetings to inform property owners, residents, and City of Somerville (the City) officials about the Site. GEI will provide copies

of this Phase V Status Report No. 25 and RMR No. 40 to the local public document repositories that were established for the Site at the Somerville Central Public Library and at the City of Somerville Clerk's Office.

This report was submitted through eDEP (Transaction No. 1655442) on February 2, 2024. A draft copy of the eDEP Transmittal Form (BWSC-108) is provided in Appendix A.

Copies of property owner notification letters, including notice of sampling letters, chemical testing results letters, and other miscellaneous correspondence sent during the reporting period, are in Appendix B. A table summarizing in-person communication with residences is also included in Appendix B.

2. GLX Project

2.1 Background

The Massachusetts Bay Transit Authority (MBTA), through its contractor GLX Constructors, has substantially completed to extend MBTA Green Line service to Union Square in Somerville and beyond to College Avenue in Medford. The GLX Project includes significant infrastructure improvements near and through the Site, including a new pump station, reconstruction of the bridge passing over Washington Street, new train tracks within the MBTA right-of-way (ROW), a new train station, and utility improvements. The MBTA, GLX Constructors, and their contractors have initiated three RTNs related to construction activities undertaken at the Site. Chris McDermott of TRC Environmental of Lowell, Massachusetts, a subcontractor to GLX Constructors, is the LSP of Record for GLX Construction.

2.2 GLX RTNs

The MBTA, GLX Constructors, and their contractors have initiated three RTNs related to construction activities undertaken at the Site.

2.2.1 RTN 3-34742

On January 23, 2018, MBTA filed a Release Notification Form (RNF) for concentrations of PCE detected in the wet well within the pump station located at 132 Washington Street. MassDEP issued RTN 3-34742. On April 25, 2019, MassDEP issued MBTA a Notice of Noncompliance for failure to submit a Permanent Solution Statement, Tier Classification Submittal, or Downgradient Property Status (DPS) Submittal within one year of the RNF. In June 2019, Weston & Sampson, on behalf of MBTA, filed a DPS Submittal attributing conditions reported in the RNF to the Site.

On July 11, 2019, TRC, on behalf of GLX Constructors, filed a RAM Plan under RTN 3-34742 for management of CVOC impacted soil encountered during GLX Project activities within Site boundaries. According to TRC, up to 14,000 cubic yards of CVOC impacted soil were to be managed under this separate RAM. TRC conducted in-situ soil sampling along the MBTA ROW behind the 50 Tufts Street building. Concentrations of PCE were detected up to 14 ppm.

On November 15, 2019, TRC filed RAM Status Report No. 1. The report states that between July and September 2019 approximately 11,680 tons of soil were transported off-site and disposed of as hazardous waste to Heritage Environmental Services landfill in Roachdale, Indiana. Although the soil was characterized as hazardous waste, it was stored off-site for

more than 90 days prior to disposal. According to TRC, a Utility-related Abatement Measure (URAM) completion report for RTN 3-35528 (Section 2.2.3) was submitted on August 7, 2019.

On May 15, 2020, TRC filed RAM Status Report No. 2. The report states that between October 2019 and March 2020 approximately 5,124 tons of soil were transported off-site and disposed of as hazardous waste to Heritage Environmental Services landfill in Roachdale, Indiana.

On February 14, 2020, GLX obtained MassDEP's approval of a Contained-In Determination Petition to reclassify excavated soil with concentrations of chlorinated VOCs less than the MCP S-1/GW1 standard as non-hazardous waste. Nonetheless, TRC reported that all excavated soil was transported off-site as listed hazardous waste.

On November 10, 2020, TRC filed RAM Status Report No. 3. The report states that between April and August 2020 approximately 1,576 tons of soil were transported off-site and disposed of as hazardous waste at Heritage Environmental Services landfill in Roachdale, Indiana.

On September 21, 2020, GLX obtained MassDEP's approval of a Contained-In Determination No.2 Petition to reclassify excavated soil with concentrations of chlorinated VOCs less than the MCP S-1/GW1 standard as non-hazardous waste. According to the RAM Status Report, between March and August 2020 approximately 2,107 tons of soil were transported off-site to Lynn Landfill, in Lynn Massachusetts, including soil managed under the Contained-In Determination.

On May 10, 2021, TRC filed RAM Status Report No. 4. According to the RAM Status Report, between October 10 and October 13, 2020 approximately 960 tons of soil were transported off-site to Lynn Landfill, in Lynn Massachusetts. In December 2020, approximately 408 tons of soil were transported to Allied Niagara Falls Landfill, in Niagara Falls, New York.

On October 27, 2021, TRC filed RAM Status Report No. 5. According to the RAM Status Report, between February 22 and August 24, 2021, approximately 4,387 tons of soil were transported off-site to Lynn Landfill, in Lynn Massachusetts. Between April 23 and August 16, 2021, approximately 362.5 tons of soil were transported off-site to Allied Niagara Falls Landfill, in Niagara Falls, New York. TRC noted in the RAM Status Report that this total does not include the tonnage report for soil shipped on July 20 and July 21, 2021.

On May 6, 2022, TRC filed RAM Status Report No. 6. According to the RAM Status Report, on July 20 and July 21, 2021, a total of 15.03 tons of soil were transported off-site to Allied Niagara Falls Landfill, in Niagara Falls, New York, the final weights were previously

missing from the RAM Status Report No. 5. Between September 6, 2021 and November 4, 2021, a total of 545.63 tons of soil were transported off-site to Allied Niagara Falls Landfill, in Niagara Falls, New York. On December 17, 2021 6.46 tons of soil were transported off-site to Lynn Landfill, in Lynn, Massachusetts. On February 2 and February 3, 2022, five loads (approximately 100 cubic yards) of soil were transported to Heritage Environmental Services in Roachdale, Indiana for disposal. The soil was generated during grading and trenching activities within the RAM Area. The disposal documents were not included in TRC's RAM Status Report No. 6.

On October 6, 2022, TRC filed RAM Status Report No. 7. On February 2 and February 3, 2022, 145.31 tons of soil were transported to Heritage Environmental Services in Roachdale, Indiana for disposal, the final weights were previously missing from the RAM Status Report No. 6. Additionally, on February 3, 2022, 27.07 tons of soil were transported off-site to Lynn Landfill, in Lynn Massachusetts. Between March 9 and March 15, 2022, a total of 519.77 tons of soil were transported off-site to Allied Niagara Falls Landfill, in Niagara Falls, New York. Between March 15 and May 25, 2022, 595.96 tons of soil were transported off-site to Lynn Landfill, in Lynn, Massachusetts.

On May 15, 2023, TRC filed RAM Status Report No. 8. On October 5, 2022, approximately 84.53 tons of soil was transported off-site to Lynn Landfill, in Lynn, Massachusetts. On October 26, 2022, approximately 17.95 tons of soil were transported off-site under a Non-Hazardous Waste Manifest to Allied Niagara Falls Landfill, in Niagara Falls, New York. Between January 12 and February 1, 2023, approximately 270.97 tons of soil was transported off-site to Winchendon Landfill, in Winchendon, Massachusetts.

On November 8, 2023, TRC filed RAM Status Report No. 9. The GLX Constructors did not transport any soil off-site during the most recent reporting period.

2.2.1.1 Contained-In Determinations

It is our understanding that soil excavated as part of the Washington Street pump house installation (RTN 3-34742) was transported and used as part of a clean soil cap at the Vehicle Maintenance Facility (VMF). The Washington Street pump house is within the boundaries of the Site (RTN 3-23246). The VMF is not. We have reviewed the Contained-In Determinations prepared by TRC on behalf of GLX Constructors for the MBTA GLX project. The following summary is based on that review; however, we have significant uncertainty since the Contained-In Determinations do not clearly explain the timeline or soil management procedures. The Contained-In Determinations are in App C.

According to a Contained-In-Determination dated February 26, 2021 that GLX Constructors submitted to MassDEP for the VMF, soil from construction of the pump house (RTN 3-34742) may have been stockpiled at the VMF for some time before it was used in the

construction of a clean soil cap beginning in 2018. Subsequently, in October 2020, soils were generated from within the VMF cap during grading and utility excavation activities and were stockpiled. The stockpiled soils were sampled and concentrations of PCE and TCE were detected above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards for a Contained-In Determination.

GLX prepared a total of three Contained-In Determinations (February 26, April 8, and April 26, 2021) for the stockpiled soils. It is unknown if the soils were reused on the VMF site or disposed off-site.

TRC submitted an additional Contained-In Determination on May 26, 2021 for soil generated near the Washington Street Pump Station and on the MBTA ROW. Soil included in the Contained-In Determination exhibited concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standard.

TRC submitted an additional Contained-In Determination on June 30, 2021, for approximately 40 cubic yards of soil generated at the VMF during utility excavations within the soil cap. Soil included in the Contained-In Determination exhibited concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standard.

TRC subsequently submitted nine additional Contained-In Determinations (July 23, November 15, November 15, and December 17, 2021, and January 20, March 3, April 25, September 8, and November 17, 2022) for soil generated near the Washington Street Pump Station. A summary of each Contained-In Determination is below:

- Soil included in the July 23, 2021, Contained-In Determination was generated at the Washington Street Pump Station during utility manhole excavations; the soil sample was collected from a stockpile (~340 cubic yards), and soil included in the Contained-In Determination exhibited concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standard.
- Contained-In Determination No. 5 dated November 15, 2021 was prepared for stockpiled soil (~500 cubic yards) generated during the excavation and removal of an Underground Storage Tank (UST) at the Washington Street Pump Station. Concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standard were detected in one of the four soil samples collected.

  On January 10, 2022, TRC submitted a clarification letter to MassDEP, stating that the soil subject to the Contained-In Determination was generated in association with the removal of a UST (RTN 3-36931) and that shipping documents would be filed under both RTN 3-34742 and 3-36931.

- A Contained-In Determination dated November 15, 2021 was prepared for stockpiled soil (~20 cubic yards) generated from the cleanup of runoff sediment at the Washington Street Pump Station. Soil included in the Contained-In Determination exhibited concentrations of PCE, 1,1,1-TCA, and TCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.
- A Contained-In Determination dated December 17, 2021 was prepared for stockpiled soil (~40 cubic yards) generated from the clean-out of the Washington Street Pump Station House. Soil included in the Contained-In Determination exhibited concentrations of PCE and TCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.
- On January 20, 2022, TRC submitted a Contained-In Determination for stockpiled soil (~ 400 cubic yards) generated during site grading at the Washington Street Pump Station. Soil included in the Contained-In Determination exhibited concentrations of PCE and TCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.
- On March 3, 2022, TRC submitted a Contained-In Determination for stockpiled soil (~ 120 cubic yards) generated during site grading at the Washington Street Pump Station. Soil included in the Contained-In Determination exhibited concentrations of PCE and TCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.
- On April 25, 2022, TRC submitted a Contained-In Determination for stockpiled soil (~ 60 cubic yards) generated during site grading at the Washington Street Pump Station. Soil included in the Contained-In Determination exhibited concentrations of PCE and TCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.
- On September 8, 2022, TRC submitted a Contained-In Determination for stockpiled soil (~ 80 cubic yards) generated during site grading at the Washington Street Pump Station. Soil included in the Contained-In Determination exhibited concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.
- A Contained-In Determination dated November 17, 2022 was prepared for stockpiled soil (~260 cubic yards) generated from site landscaping at the Washington Street Pump Station. Soil included in the Contained-In Determination exhibited concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards.

2.2.2 RTN 3-30620

On July 18, 2019, TRC, on behalf of GLX Constructors, filed RAM Status Report No. 7, under the Special Project Designation (SPD) RTN 3-30620. According to TRC, approximately 5,440 cubic yards of soil were excavated from within the Site boundary as part of GLX Project activities conducted under the SPD. TRC stated in RAM Status Report No. 7 that soil to be excavated in the future would be managed under a different RAM Plan submitted under RTN 3-34742. The Report also stated that dewatered groundwater would be managed under a URAM under RTN 3-35528.

2.2.3 RTN 3-35528

On April 12, 2019, TRC, on behalf of GLX Constructors, filed a URAM Plan for managing potentially contaminated soil and dewatered groundwater associated with installing a stormwater conveyance system within and adjacent to the MBTA ROW and the demolition and replacement of the existing Washington Street Pump Station. TRC estimated up to 6,000 cubic yards of soil would be generated under the URAM.

On August 7, 2019, TRC filed a URAM Completion Report for RTN 3-35528. The report stated that 1,950 cubic yards of soil were excavated and managed under the URAM. Some of the soil was stockpiled within the ROW and some was transported offsite and stockpiled at an unidentified MBTA-owned property. The report also stated that off-site disposal of a portion of this stockpiled soil to an unidentified out-of-state hazardous waste landfill began on or about July 14, 2019. Disposal of the stockpiled soil was expected to take 45 days.

In the URAM Completion Report, TRC states that all future soil originating from the Site and the ROW adjacent to the Site would be managed under the July 2019 RAM Plan for RTN 3-34742, and that all disposal documentation related to soil, sediment and granulated activated carbon (GAC) change outs would be submitted in RAM Status Reports for RTN 3-34742.

2.2.4 Soil Characterization Data from MBTA ROW and Washington Street

On December 23, 2019 the MBTA provided UniFirst with a copy of a letter from Michael Clark, P.E. LSP, BSC Group of Boston, Massachusetts addressed to Andrew Friedmann, PhD of the MassDEP providing analytical results for soil disposal pre-characterization samples collected for construction purposes within the MBTA ROW between October 20 and November 6, 2019. The ROW sample locations are on Fig. 2-1, and a summary of the soil analytical results are in Appendix C.

In February and March 2020, GLX Constructors collected pre-characterization samples for construction purposes beneath the Washington Street bridge and along the ROW as documented in RAM Status Report No. 2 for RTN 3-34742. The sampling locations are on Fig. 2-1 and a summary of the soil analytical results are in Appendix C.

In April 2020, GLX Constructors collected pre-characterization samples for construction purposes on the 50 Tufts Street property near the northwest corner of Tufts Street and Washington Street and within Washington Street as documented in RAM Status Report No. 3 for RTN 3-34742. The sampling locations are shown on Fig. 2-1 and a summary of the soil analytical results are in Appendix C.

Between July 17 and August 18, 2020 GLX Constructors collected pre-characterization samples for construction purposes from stockpiles generated during excavation of manholes on the 50 Tufts Street property and from within the project ROW as documented in RAM Status Report No. 3 for RTN 3-34742. A summary of the soil analytical results are in Appendix C.

On April 8, 2021, GLX Constructors collected a sample from an excavation at the Washington Street pump station and two soil samples from stockpiles generated during pump station utility excavations. The samples were collected to update characterization data to facilitate the disposal of soil as documented in the May 2021 Contained-In Determination and RAM Status Report No. 5 for RTN 3-34742. The sampling locations are on Fig. 2-1 and a summary of the soil analytical results are in Appendix C.

Between April 23 and June 10, 2021, TRC collected pre-characterization samples for construction purposes from stockpiles generated during excavation of utility lines and utility manholes within the project RAM Area as documented in RAM Status Report No. 5 for RTN 3-34742. A summary of the soil analytical results is in Appendix C.

On October 7, 2021, TRC collected a pre-characterization sample from a stockpile generated during the removal of a UST in connection with IRA activities. The soil samples were included in RAM Status Report No. 6, and the IRA RTN (3-36931) was linked to RTN 3-34742 due to the detection of PCE in the soil stockpile. A summary of the soil analytical results is in Appendix C.

Between October 22 and November 9, 2022, TRC collected two pre-characterization samples for construction purposes from soil generated during the clean-out of the Washington Street Pump House as documented in RAM Status Report No. 6 for RTN 3-34742. A summary of the soil analytical results is in Appendix C.

On November 11, 2022, TRC collected one pre-characterization sample for construction purposes from stockpiles generated during grading and trenching activities within the

RAM Area as documented in RAM Status Report No. 6 for RTN 3-34742. The stockpile characterized was approximately 140 cubic yards. The soil was characterized for disposal at Heritage Environmental Services, in Roachdale, Indiana. A summary of the soil analytical results is in Appendix C.

Between December 20, 2021 and January 12, 2022, TRC collected two pre-characterization samples for construction purposes from stockpiled soil generated during grading activities in the RAM Area as documented in RAM Status Report No. 6 for RTN 3-34742. A summary of the soil analytical results is in Appendix C.

On March 11, 2022, TRC collected one characterization sample for construction purposes from stockpiled soil generated during installation of a gas line as documented in RAM Status Report No. 7 for RTN 3-34742. The stockpile characterized was approximately 60 cubic yards. The soil was characterized for disposal at Lynn Landfill, in Lynn, Massachusetts. A summary of the soil analytical results is in Appendix C.

On July 27, 2022, TRC collected one characterization sample for construction purposes from stockpiled soil generated during grading activities at the Washington Street Pump Station as documented in RAM Status Report No. 7 for RTN 3-34742. The stockpile characterized was approximately 80 cubic yards. The soil was characterized for disposal at Lynn Landfill, in Lynn, Massachusetts. A summary of the soil analytical results is in Appendix C.

On November 3, 2022, TRC collected one characterization sample from stockpiled soil generated during landscaping activities as documented in RAM Status Report No. 7 for RTN 3-34742. The stockpile characterized was approximately 260 cubic yards. The soil was characterized for disposal at Winchendon Landfill, in Winchendon, Massachusetts. A summary of the soil analytical results is in Appendix C.

On September 8, 2023, TRC collected one characterization sample from stockpiled soil generated from cleaning out the stormwater management drainage system as documented in RAM Status Report No. 9 for RTN 3-34742. The stockpile characterized was approximately 20 cubic yards. The Status Report states that the anticipated soil disposal location is Winchendon Landfill, in Winchendon, Massachusetts. A summary of the soil analytical results is in Appendix C.

3. Current Conceptual Site Model and Disposal Site Boundary

As defined in the MCP, the Conceptual Site Model (CSM) is a "dynamic framework for assessing site characteristics and risk, identifying and addressing data gaps and managing uncertainty, eliminating or controlling contaminant sources, developing and conducting response action strategies, and evaluating whether those strategies have been effective in achieving desired endpoints." (310 CMR 40.0006). GEI has developed and continued to update the CSM for the Site as appropriate based upon the investigation data documented in previous reports, including the Phase II Comprehensive Site Assessment, Immediate Response Action (IRA) Plan and Status Reports, the Phase IV Remedy Implementation Plan (RIP), and prior Phase V Remedy Operations (ROS) Status Reports. In Phase V Status Report No. 17, GEI updated the CSM and Disposal Site Boundary to include a portion of the MBTA ROW near Cross Street where de minimis PCE concentrations were detected in soil samples collected for construction purposes.

4. Data Collection

4.1 Groundwater Sampling

GEI conducted semi-annual groundwater sampling at 4 monitoring wells in November 2023. GEI also collected one groundwater sample from MW108 in September 2023. The groundwater samples were analyzed by Alpha Analytical (Alpha) or Westborough, Massachusetts for VOCs and as applicable Monitoring Natural Attenuation (MNA) parameters. A summary of all GEI groundwater sampling activities at the Site, including dates of sampling during this reporting period, is in Table 4-1. The groundwater testing results are summarized in Table 4-2, along with groundwater data from previous investigations. Groundwater sampling conducted on behalf of the MBTA between 2012 and 2014 by Kleinfelder, and in 2020 by TRC, as part of the GLX Project is summarized in Table 4-3.

Monitoring well locations and the monitoring wells sampled by GEI during this reporting period are shown in Fig. 4-1. The laboratory data report associated with the September and November 2023 groundwater testing is in Appendix D.

4.2 Comparison of PCE Concentrations to GW-2 Standards

Fig. 1-2 presents the disposal site boundary, based on laboratory analytical results for environmental samples collected through November 2023. Fig. 1-2 also delineates the areas in which concentrations of PCE in shallow groundwater (i.e., 15 feet or less) exceed current and pending Method 1 GW-2 standards, based on Site-wide groundwater sampling results through November 2023.

The current Method 1 GW-2 standard for PCE in shallow groundwater is 50 micrograms per liter (µg/L). MassDEP has filed final 2024 revisions to the MCP on September 1, 2023, which are effective on March 1, 2024. These regulations change the Method 1 GW-2 standard for PCE to 20 µg/L. Fig. 1-2 shows the extent of PCE in shallow groundwater exceeding the updated Method 1 GW-2 standard, which is not significantly different from the extent of PCE in shallow groundwater exceeding the current GW-2 standard (50 µg/L). Extensive sub-slab soil vapor and indoor air testing has been performed at the properties that are within the area where PCE in shallow groundwater exceeds 20 µg/L, except for 159 Glen Street, where the owner has been unresponsive to access request letters and property visits seeking access to conduct sampling. We do not anticipate that additional investigation will be required in response to the updated Method 1 GW-2 standard for PCE.

4.2.1 Groundwater Plume Stability

Based on historic groundwater sampling conducted since 2006, the nature and extent of groundwater contamination at the Site has been well-characterized. In addition, groundwater analytical results are incorporated into the MNA program to support the plume stability monitoring and natural attenuation evaluation, as discussed in Section 9.

4.3 Soil Vapor Sampling

From January 2006 through December 15, 2023, GEI collected soil vapor samples at 58 residences and commercial buildings. Fig. 4-2 shows buildings where GEI conducted soil vapor sampling. The procedure for collecting soil vapor samples was in IRA Status Report No. 3. Samples typically were collected from below the basement slab.

During this reporting period, GEI collected sub-slab samples from one residential property (31 Tufts Street) and from one mixed-use property (103 Washington Street). The sub-slab soil vapor samples were submitted to Alpha for laboratory analysis by EPA Method TO-15 with the following modified list of analytes:

- 1,1-Dichloroethane
- 1,1-Dichloroethylene (1,1-DCE)
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane (TCA)
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Vinyl Chloride

The sub-slab soil vapor testing results are in Table 4-4 (31 Tufts Street) and Table 4-5 (103 Washington Street). The laboratory data report is in Appendix D.

4.4 Soil Vapor Sampling – Checklists and Methods

GEI collected sub-slab soil vapor samples from 31 Tufts Street and 103 Washington Street. New monitoring points were installed at 31 Tufts Street during this reporting period. Sub-slab soil vapor samples were collected to evaluate the concentrations of chlorinated VOCs in soil vapor beneath the buildings. GEI collected soil vapor samples using SUMMA® canisters and regulators provided by Alpha. Each canister was certified clean. Copies of the certifications are in Appendix D. The soil vapor samples were collected over a 1-hour period.

Flow regulators were attached to the SUMMA® canisters at the location of the testing. The laboratory-set flow regulator was then turned on, and the starting pressure and time recorded. The regulator was turned off before reaching ambient pressure, and the final pressure and time were recorded. Sub-Slab Monitoring Point Installation Log, Pre-Sampling Checklists, and Sub-Slab Sampling Checklists completed for the sub-slab soil vapor samples collected during this reporting period are in Appendix E.

4.5 Indoor Air Sampling

From January 2006 through December 15, 2023, GEI collected indoor air samples at 75 residences and commercial buildings. Fig. 4-2 shows buildings where GEI conducted indoor air sampling. The procedure for collecting indoor air samples was in IRA Status Report No. 3. Samples are typically collected from the basement and first floor of each building.

Between June 16, 2022 and December 15, 2023, GEI collected indoor air samples from one residential property (31 Tufts Street) and 103 Washington Street. The property at 103 Washington Street is a new development replacing an auto repair shop. The building is a mixed-use development with commercial space and open-air parking on the first floor and residential units above.

The indoor air samples were submitted to Alpha for laboratory analysis by EPA Method TO-15 with the following modified list of analytes:

- 1,1-Dichloroethane
- 1,1-Dichloroethylene (1,1-DCE)
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane (TCA)
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Vinyl Chloride

The recent and historical indoor air testing results are in Table 4-6 (31 Tufts Street) and Table 4-7 (103 Washington Street). The laboratory data report is in Appendix D.

4.6 Indoor Air Sampling – Checklists and Methods

GEI collected indoor air samples from the first floor and the basement of residences using SUMMA® canisters and regulators provided by Alpha. Each canister was certified clean by Alpha. Copies of the certifications are in Appendix D. The indoor air samples were collected over an approximately 24-hour period.

Flow regulators were attached to the SUMMA® canisters at the location of the testing. The SUMMA® canisters were placed so that the air inlet was approximately 3 to 5 feet above the floor. The laboratory-set flow regulator was then turned on, and the starting pressure and time were recorded. The regulator was turned off before reaching ambient pressure, and the final pressure and time were recorded. Pre-Sampling Checklists and Indoor Air Sampling Checklists completed for each indoor air sample collected during this reporting period are in Appendix E.

4.7 Meteorological Conditions

Measurements were taken with a portable barometer and thermometer during soil vapor sampling at and were recorded on the Indoor Air and Sub-Slab Sampling Checklists (Appendix E). Meteorological conditions recorded during indoor air sampling events for this reporting period are summarized in Table 4-8.

5. Capuano Center

5.1 Background

The mitigation system at the Capuano Center is an SSDS with 18 sub-slab extraction points in six classrooms of the east wing. The interior slab/exterior wall joints of the six classrooms were sealed with a flexible epoxy sealant and extraction points were installed horizontally through the exterior wall. GEI began operating the SSDS on February 1, 2007.

The system sub-slab vapor extraction points are attached to three collection headers in exterior underground trenches, which are connected to three dedicated discharge pipes with radon fans for each collection header above the roofline of the Capuano Center. Remote telemetry on the system consists of two radio nodes and three pressure switches connected to the three radon fans to send notification of a system shut down remotely to the wireless remote monitoring hub located at the Property.

The system does not include off-gas treatment. Based upon the measured flow rate and VOC concentrations, the annual discharge rate of VOCs from the system has been significantly less than 100 lbs per year; therefore, no off-gas treatment is required per MassDEP Policy No. WSC-94-150: "Off-gas Treatment of Point-Source Remedial Air Emissions," dated 1994.

5.2 Remedial Objectives

The design objectives of the Capuano Center mitigation system were to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for occupants of the Capuano Center.

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences the southern portion of the east wing. In conjunction with the physical sealing of the slab/wall joint, this indicates the soil vapor migration pathway to indoor air is controlled by the system.

5.3 Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP, and in accordance with the requirements and schedule presented in subsequent Phase IV Status Reports, and the Phase IV FIR/Phase V ROS.

Monitoring of the system was historically performed monthly; however, once telemetry was installed on the system, GEI began performing quarterly monitoring in July 2015. Monitoring of system parameters at the headers (flow rate, vacuum, and photoionization detector [PID] readings) and PID readings at outdoor monitoring points are conducted quarterly. Inspection and monitoring at the Capuano Center were performed two times from June to December 2023. A summary of monitoring activities conducted during this reporting period is in Table 5-1 and the Field Monitoring Forms are in Appendix F.

5.4 System Modifications

GEI was notified of the shutdown of the fan installed in Manifold 12 on June 23, 2023. Following an investigation of the fan's performance, a new fan was ordered and installed on August 24, 2023. Following system start up, GEI received an alert that the fan was running.

5.5 Performance Efficiency and Effectiveness

GEI has completed 24 rounds of indoor air sampling in the Capuano Center. The results of each round of sampling show that the system is meeting remedial design objectives (Table 5-2). Based on the indoor air testing results, and regularly collected system performance data, the soil vapor migration pathway to indoor air has been eliminated and a condition of NSR has been achieved for occupants of the Capuano Center. GEI has discontinued indoor air sampling and relies on monitoring of operating parameters for the system to confirm continued effectiveness.

5.6 Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the subsurface collection header pipes, or the cleanout drain for the header pipes. If observed, SSDS condensate will be pumped from the headers into the cleanout, which drains into the subsurface at the property.

5.7 Future Phase V Activities

Based on indoor air testing results, a condition of NSR has been achieved for occupants of the Capuano Center and the system is achieving the remedial design objectives. Since remote telemetry is now installed on the system, GEI will continue to monitor operational parameters and sub-slab conditions for the system (e.g., flow rate, vacuum), and collect readings from all outdoor monitoring points quarterly, to confirm ongoing system performance. GEI discontinued monitoring at interior monitoring points in April 2016, and instead relies on vacuum monitoring at exterior monitoring points to evaluate system effectiveness. During monitoring events, GEI will also perform maintenance tasks, which may include draining accumulated water from the collection headers and correcting any issues observed during routine inspection of system components.

5.7.1 Longest Allowable Duration of AEPMM Shutdown

An operating regime and OMM plan for the Capuano Center AEPMM were included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR is 6 years for the Capuano Center system.

5.7.2 Regulatory Closure

As discussed further in Section 6.6, a Permanent Solution with Conditions can be achieved for properties where an AEPMM has achieved the remedial objectives, an AUL has been recorded for the property, and telemetry is installed. A Partial Permanent Solution with Conditions Statement may be submitted to achieve regulatory closure for the Capuano Center if the owner of the property, the City of Somerville, executes an AUL.

6. Residential and Commercial Properties

6.1 EPMM Installation

Through December 15, 2023, EPMMs have been installed at 23 residential and commercial properties. EPMMs were also installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center. The EPMMs at 50 Tufts Street, 60 Tufts Street, and the Capuano Center are discussed separately in this report.

There had been an EPMM in the former auto shop at 103 Washington which was demolished. An EPMM had not been installed in 105 Washington Street. 103 Washington Street and 105 Washington Street are mixed-use redevelopments with commercial space and open-air parking on the first floor and residential units above. 31 Tufts Street was a vacant lot and has been redeveloped as multi-family housing and an EPMM was installed. 10 Morton Street is a single-family residence with an installed EPMM; it is currently being renovated and the EPMM will be replaced. Accordingly, there are currently 22 installed EPMMs at the Site.

6.1.1 103 and 105 Washington Street

The properties at 103 and 105 Washington Street are being developed into mixed-use commercial and residential buildings by the same entity.

The building at 105 Washington Street was demolished between March and June 2019 and construction on the redevelopment began in July 2019. As of June 2022, construction was complete and the building is occupied.

GEI conducted indoor air and sub-slab soil vapor sampling at 105 Washington Street in March 2022, February 2023, and May 2023. Concentrations of VOCs were not detected above the MassDEP commercial soil vapor screening values, or the residential indoor air Threshold Values (TVs) indicating that the vapor intrusion pathway is unlikely to be of concern under current or future conditions. Additional sampling is not planned for 105 Washington Street.

GEI reached out numerous times to the developer regarding installing a vapor mitigation system at 103 Washington Street. The developer did not agree to installation of a system, although they did consent to soil gas and indoor air testing. The building at 103 Washington Street is in the final stages of construction with only the interior finishes and exterior landscaping/paving to be completed. In May 2023, GEI conducted indoor air and sub-slab soil vapor sampling. The indoor air sample collected on the first floor did not exceed commercial or residential TVs.

In July 2023, GEI conducted sub-slab soil vapor sampling in the basement, and indoor air sampling in the basement and first floor commercial space. Concentrations of TCE were detected above the commercial sub-slab soil vapor screening value in one sample. Concentrations of PCE in the same sample exceeded the residential sub-slab soil vapor screening value. Concentrations of trans-1,2-dichloroethylene, PCE, and/or TCE in indoor air samples collected on the first floor and basement were detected above residential TVs, however they were not above commercial TVs. The first floor is commercial space and open-air parking with residential units above. Additional sampling is planned for winter 2024.

6.1.2 31 Tufts Street

The property at 31 Tufts Street, formerly a paved parking lot, has been redeveloped as multi-family housing. 31 Tufts Street LLC and Tufts Glen Pocket Park LLC currently are joint owners of the property. E3 Development, Inc. is the Manager and designated developer. E3 Development has constructed a three-story residential apartment building and public open space. MassDEP assigned RTN 3-37468 to the 31 Tufts Street property based on concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals exceeding the applicable MassDEP reportable concentrations in soil (RCS 1) standards. These conditions are not attributable to the 50 Tufts Street Site. On July 25, 2022, GEI submitted a RAM Plan on behalf of the owner for response actions in connection with construction, including soil management and installation of a vapor barrier and a sub-slab ventilation piping network beneath the building. In September 2022, GEI observed the installation of a vapor barrier and a sub slab ventilation piping network beneath the building. In October 2022, GEI observed a smoke test to confirm barrier integrity. On December 5, 2023, GEI submitted a RAM Completion Report and Permanent Solution Statement for RTN 3-37468. GEI has conducted the first round of sub-slab soil vapor and indoor air sampling as discussed in Section 4. We will continue coordinating with the owner and developer of the property to perform a vapor intrusion evaluation at the property.

6.1.3 121 Washington Street

The property at 121 Washington Street is being redeveloped into residential apartment units. A small commercial building and paved parking formerly occupied property. The building was demolished in October 2020. As of December 2023, the framework and construction of the exterior walls have begun. GEI is coordinating with the owner and developer of the property to incorporate vapor mitigation components into the building construction. A RAM Plan will be submitted to MassDEP to support the vapor mitigation installation effort.

6.2 EPMM Status

Fig. 6-1 shows the buildings with EPMMs installed. Table 6-1 presents the as-built design information for each installed EPMM.

The EPMM designs are categorized as Option 1, Option 2, or Option 3, as conceptually defined below:

- Option 1 – SSDS: This option includes the installation of one or more sub-slab vapor extraction points and a collection piping network connected to an electric fan located outside the building envelope. The fan is equipped with a condensate bypass drain and the fan exhaust is discharged above the eave line of the roof. To date, no SSDSs (except for the system at the Property) require off-gas treatment. This option is installed in buildings with adequate sub-slab air flow and a competent concrete slab, or those properties where vapor barrier and venting systems are infeasible.
- Option 2 – Vapor Trench: The vapor trench option is a sub-slab venting system installed in a shallow trench around the interior basement perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the slab and stucco walls. The trench is backfilled with crushed stone and finished with approximately three inches of new concrete to meet the existing slab surface. This option is installed in buildings with poor sub-slab air flow, a competent concrete slab, and a fieldstone and/or brick foundation. Sub-slab vapors are vented through a piping network that exits the building envelope at the sill elevation and terminates above the eave line of the roof.
- Option 3 – New Slab: The new slab installation option is a new concrete slab, a sub-slab vapor barrier, and a floor venting system; applying cement stucco to the walls; and applying an epoxy vapor barrier to the new slab and stucco walls. This option is installed in buildings with poor sub-slab air flow, an incompetent concrete slab, and a fieldstone and/or brick foundation. As with Option 2, sub-slab vapors are vented through a piping network that exits the building envelope at the sill elevation and terminates above the eave line of the roof.

The decision-making process for selecting a conceptual design based on Site-specific conditions is illustrated in Fig. 6-2. Table 6-1 identifies the design option for each EPMM currently installed and the primary engineering components of each.

6.2.1 Remedial Objectives

The design objectives of the EPMMs were to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air in residential buildings.
- Achieve a condition of NSR for occupants of the residence or commercial building.

6.3 Option 1 EPMMs

Option 1 EPMMs consist of active sub-slab depressurization achieved by the installation of a radon fan and associated network of piping. Several of the Option 1 EPMMs were originally installed as Option 2 or Option 3 EPMMs; however, the concentrations of PCE measured in the post-installation indoor air did not constitute a condition of NSR, and a fan was installed. Option 1 EPMMs have been installed at the following 10 properties:

- 35-37 Knowlton Street (originally Option 3)
- 31-33 Knowlton Street
- 13 Morton Street
- 18 Morton Street
- 23 Tufts Street
- 103 Washington Street (deactivated May 31, 2017)
- 95 Franklin Street (originally Option 2)
- 9 Knowlton Street
- 13 Knowlton Street
- 27 Tufts Street (originally Option 3)

Prior to the MCP amendments effective June 20, 2014, these properties could not achieve a Permanent Solution because of the operation of an active system. These properties can now achieve regulatory closure with a Partial PSS with Conditions, provided that the property owner executes an AUL. The condition associated with the PSS would be operation and maintenance of the AEPMM in accordance with the AUL.

6.3.1 Operation and Monitoring

To confirm the performance of an EPMM, indoor air samples are collected shortly after installation is complete. As identified in the Phase IV FIR/Phase V ROS for Option 1 EPMMs, following the initial post-installation indoor air sampling, indoor air samples were collected one time per winter for two consecutive years. In accordance with MassDEP guidance, "WSC No. 16-435: Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure," dated October 14, 2016 (2016 VI Guidance), GEI modified the post-installation indoor air sampling for newly installed Option 1 EPMMs to demonstrate effectiveness. Once a pressure differential has been established, one round of indoor air sampling is performed during the heating season. The samples are analyzed for Site-specific chlorinated VOCs. Following one round of indoor air sampling, differential pressure across the slab will be used to demonstrate system effectiveness.

Inspection and monitoring also includes measuring VOCs at sub-slab sampling points with a PID, collecting pressure measurements using a manometer, and inspecting system components. If needed, repairs or modifications will be scheduled.

A summary of OMM activities performed for Option 1 EPMMs during this reporting period is presented in Table 6-2. During this reporting period GEI conducted EPMM inspections at 9 Knowlton Street, 13 Knowlton Street, 13 Morton Street, 18 Morton Street, 23 Tufts Street, and 27 Tufts Street. GEI has been unable to access 35-37 Knowlton Street, however, according to real estate records the property was sold in May 2023. GEI is attempting to contact the new owner of the property to continue inspections. Additionally, GEI understands that the property at 31-33 Knowlton Street sold in May 2023; GEI is attempting to contact the new owner of the property to continue inspections. EPMM Inspection Forms are in Appendix G.

6.3.2 EPMM Shutdown

Based on focused Method 3 risk characterization calculations performed by ARCADIS, which incorporate pre-EPMM indoor air sampling results, several Option 1 EPMMs at the Site may not be required to maintain a condition of NSR. This is a result of the updated MassDEP toxicity characterization for PCE issued in January 2014.

6.3.2.1 AEPMM Closure Testing at 13 Knowlton Street

On November 1, 2016, a shutdown valve was installed on the SSDS riser pipe at 13 Knowlton Street. To simulate conditions without operation of the AEPMM, the SSDS fan was turned off and the shutdown valve was closed, for one week, prior to collecting soil vapor and indoor air samples in December 2016, February 2018, March and November 2019, and January 2023.

After the indoor air and soil vapor sampling was completed, the shutdown valve was opened, and the fan was reactivated. Based on the results of the Option 1 EPMM closure sampling, GEI will continue to evaluate the need for an AEPMM to achieve a condition of NSR at 13 Knowlton Street.

6.3.2.2 AEPMM Closure Testing at 9 Knowlton Street

On May 11, 2022, a shutdown valve was installed on the SSDS riser pipe at 9 Knowlton Street. To simulate conditions without operation of the AEPMM, the SSDS fan was turned off and the shutdown valve was closed, for six weeks, prior to collecting soil vapor and indoor air samples in June 2022. The SSDS fan was turned off and the shutdown valve was closed, for one week, prior to collecting additional rounds of soil vapor and indoor air samples in January and March 2023.

After the indoor air and soil vapor sampling was completed, the shutdown valve was opened, and GEI requested that the owner reactivate the fan. Based on the results of the Option 1 EPMM closure sampling, GEI will evaluate the need for an AEPMM to achieve a condition of NSR at 9 Knowlton Street based on a Method 3 Risk Characterization.

6.3.3 Longest Allowable Duration of AEPMM Shutdown

An operating regime for residential AEPMMs was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the systems. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the following exposure durations were calculated for Option 1 EPMMs where pre-EPMM indoor air data were available:

- 13 Knowlton Street: 54 years
- 23 Tufts Street: 11 years
- 27 Tufts Street: 25 years
- 31-33 Knowlton Street: 31 years
- 35-37 Knowlton Street: 4 years

Several Option 1 EPMMs were installed based on sub-slab soil vapor results, and pre-EPMM indoor air data are not available (including 13 Morton Street, 18 Morton Street, 95 Franklin Street, 103 Washington Street, and 9 Knowlton Street). However, based on the proximity of the AEPMMs throughout the Site, the shutdown exposure durations calculated for the properties with pre-AEPMM indoor air data are likely representative of the AEPMM properties with no pre-AEPMM indoor air data. Therefore, the longest duration of shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR at these properties is likely between 4 and 54 years.

6.3.4 Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below laboratory reporting limits to the extent feasible, and to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2023, the results of post-EPMM installation indoor air sampling and monitoring indicate that each of the Option 1 EPMMs installed or activated at residential and commercial properties has achieved the remedial objectives.

6.3.5 System Maintenance and Modifications

GEI has been evaluating the current telemetry system in consideration of the 2024 MCP amendments. The 2024 amendments include continual monitoring of system vacuum. However, GEI understands that properties where telemetry systems are already registered with MassDEP will be grandfathered in (310 CMR 40.1026[3][d][6], effective March 1, 2024), and will not be required to report system vacuum. As part of EPMM inspections at Option 1 systems, GEI replaced the radio node battery. In the event that a property is to be closed with a Partial Permanent Solution with Conditions requiring an AUL, hardware changes at residences will be necessary when the amendments go into effect, including replacing the radio node on the exterior of the house and replacing vacuum pressure switches with vacuum pressure transducers in the basement of each residence. These modifications will require GEI to access the interior of residences. Should this option be selected for closure in the future, GEI will coordinate with property owners at that time to perform the required system modifications.

6.3.6 Management of Waste Materials

No waste materials associated with Option 1 EPMMs were generated during the reporting period.

6.4 Option 2 and 3 EPMMs

Option 2 and 3 EPMMs consist of passive vapor mitigation and do not require mechanical operation or maintenance. Option 2 or 3 EPMMs have been installed at the following 11 properties:

- 95R Franklin Street (Option 2)
- 12 Morton Street (Option 3)
- 11 Morton Street (Option 2)
- 4 Morton Street (Option 3)
- 10 Morton Street (Option 3)
- 91-93 Franklin Street (Option 3)
- 17 Knowlton Street (Option 3)
- 32 Knowlton Street (Option 3)
- 34 Knowlton Street (Option 3)
- 19-19A Morton Street (Option 3)
- 166-168 Glen Street (Option 3)

In accordance with the MCP (310 CMR 40.1000) prior to the June 20, 2014 MCP amendments, regulatory closure was achieved with a Class A-3 Response Action Outcome

Partial (RAO-P) Statement for several properties with an Option 2 or 3 EPMM. The properties that have achieved a Class A-3 RAO-P are presented in Fig. 6-3. In the amended MCP, the term "Response Action Outcome" has been replaced with "Permanent or Temporary Solution." Subsequent regulatory closure for individual properties with Option 2 or 3 EPMMs will be achieved with Partial PSSs with Conditions. The condition associated with the PSSs with Conditions will be maintenance of the passive EPMM in accordance with an AUL.

6.4.1 Operation and Monitoring

To confirm the performance of an EPMM, indoor air samples are collected shortly after installation is complete. As identified in the Phase IV FIR/Phase V ROS for Option 2 and 3 EPMMs, following the initial post-installation indoor air sampling, indoor air samples were collected two times per year (including one winter sample) for two consecutive years. In accordance with MassDEP 2016 VI Guidance, GEI modified the post-installation indoor air sampling for newly installed Option 2 and 3 EPMMs to demonstrate effectiveness:

- If groundwater concentrations are less than two times the Method 1 GW-2 standard, and sub-slab soil gas concentrations are less than two times soil gas screening values, and indoor air concentrations are less than two times threshold values (TVs), GEI will perform 2 rounds of indoor air sampling, with one round occurring during the heating season.
- If groundwater concentrations are greater than two times the Method 1 GW-2 standard, and/or sub-slab soil gas concentrations are greater than two times soil gas screening values, and/or indoor air concentrations are greater than two times TVs, GEI will perform quarterly indoor air sampling, with two rounds occurring during the heating season.

Additional indoor air sampling beyond the first year may be performed based on property-specific conditions. Samples will be analyzed for Site-specific chlorinated VOCs. During indoor air sampling, the condition of the EPMM will be inspected and, if needed, repairs or modifications will be scheduled.

Following the completion of post-installation indoor air sampling, annual inspection and monitoring will include inspecting system components. If needed, repairs or modifications will be scheduled.

A summary of OMM activities performed for Option 2 and 3 EPMMs during this reporting period is presented in Table 6-2. GEI performed EPMM inspections at: 17 Knowlton Street, 32 Knowlton Street, 34 Knowlton Street, 91-93 Franklin Street, 166-168 Glen Street, and 11 Morton Street. GEI was unable to access: 4 Morton Street, 11 Morton Street, 12 Morton Street, 19-19A Morton, 91-93 Franklin Street, 17 Knowlton Street, and 95R Franklin Street during the reporting period. Because the EPMM has been removed for construction at

10 Morton Street, GEI did not conduct an inspection. GEI will continue its attempts to obtain access for EPMM inspections at these properties during the next reporting period. EPMM Inspection Forms are in Appendix G.

6.4.1.1 10 Morton Street Renovation

GEI was made aware of a property sale for 10 Morton Street on February 14, 2023, through contact with the new homeowner. The new homeowner indicated that they had plans to renovate the basement of the home. In order to evaluate the need for the continued presence of the EPMM installed beneath the slab, four soil vapor points were installed and sampled in March and April 2023.

On June 21, 2023, GEI submitted a RAM Plan to address contemplated changes to activities and uses of the Property as they relate to the previously-installed EPMM. Based on historic (2007 and 2008) and recent (2023) sub-slab soil gas sampling, an updated Unit Risk Factor for PCE (2014) and the "WSC No. 16-435: Vapor Intrusion Guidance," dated October 2016 (2016 VI Guidance), GEI concluded in the RAM Plan that the EPMM was no longer required to maintain a condition of No Significant Risk (NSR) and could be demolished. However, in response to comments subsequently received from MassDEP, a RAM Plan Modification was submitted on November 8, 2023 to provide for a sub-slab venting system and 20 mil vapor barrier to be installed during renovations and for post installation sub-slab soil gas and indoor air testing to be conducted to evaluate whether an EPMM and an AUL are required to maintain a condition of NSR.

The RAM began in June 2023 and is anticipated be completed in the winter of 2023/2024 when the basement foundation slab sub-slab venting, vapor barrier, and walls are reinstalled and confirmatory sub-slab soil vapor data can be collected.

6.4.2 Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below laboratory reporting limits to the extent feasible, and to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2023, the results of post-EPMM installation indoor air sampling indicate that the Option 2 or 3 EPMMs currently installed at residential properties have achieved the remedial objectives.

6.4.3 System Maintenance and Modifications

No modifications were made to systems during the reporting period.

6.4.4 Management of Waste Materials

No waste materials associated with Option 2 or 3 EPMMs were generated during the reporting period.

6.5 Activity and Use Limitations

It is anticipated that AULs may be recorded for each property where an EPMM is installed, and the property owner executes the AUL. No AULs were recorded during this reporting period.

6.6 Permanent Solution Statements

GEI evaluates the groundwater chemical testing results collected during MNA activities to update and supplement the plume stability monitoring and natural attenuation evaluation, as presented in the Phase II CSA / Phase III RAP report. An evaluation of the MNA program indicates that the groundwater plumes are stable, overall groundwater concentrations of chlorinated VOCs are not increasing, and natural attenuation processes are occurring at the Site which will likely reduce contaminant concentrations in groundwater over time. Previous investigations have also demonstrated that soil vapor plumes are stable. Visible NAPL has not been observed at the Site, and any DNAPL that may be present is not migrating and exists in a stable configuration. The Phase III demonstrated that it is not feasible to eliminate DNAPL at the Site. There are no unpermitted releases of OHM at the Site. Accordingly, all sources of OHM at the Site have been eliminated or controlled to the extent feasible.

The Updated 2015 Method 3 Risk Characterization that ARCADIS prepared was presented in Phase V Status Report No. 8 and RMR No. 23. The Updated 2015 Method 3 Risk Characterization incorporated updated soil, groundwater, and indoor air data sets, and also included updated MassDEP toxicity information, particularly for PCE and TCE. GEI also routinely performs Method 3 risk screening for additional indoor air data collected since 2015. Based on these risk evaluations, a condition of NSR exists for current and future building occupants at each property within the Site. Based on the Updated 2015 Method 3 Risk Characterization, a condition of NSR does not exist for future construction workers performing excavations at the Property or within the MBTA ROW. The inhalation of excavation air pathway associated with the MassDEP change in TCE toxicity is the main driver of potential risks for construction workers in both of these exposure areas. However, these construction worker risks can and should be managed with a Health and Safety Plan (HASP) that is prepared and implemented prior to subsurface work in these exposure areas.

Based on a demonstration of source control at the Site, and a condition of NSR at individual properties, many of the individual properties are eligible for a Partial PSS in accordance with

the MCP (310 CMR 40.1000). The filing of a Partial PSS for an individual property documents the achievement of regulatory closure under the MCP for that property. Therefore, the Phase V provisions do not apply to properties for which an RAO-P or Partial PSS has been submitted.

The properties that have achieved a Partial PSS are shown on Fig. 6-3. A summary of the different classes of Partial PSSs to be submitted in the future for properties at the Site, depending on the property-specific conditions and the type of mitigation, if any, are discussed below.

Active operation and maintenance is required for Option 1 EPMMs. Based on the MCP amendments effective June 20, 2014, a PSS with Conditions can be achieved for properties with an Option 1 EPMM. The condition associated with the PSSs with Conditions would be maintenance of the EPMM in accordance with an AUL. No new AULs were recorded during the reporting period.

6.6.1 Permanent Solution without Conditions

GEI will prepare a Partial PSS without Conditions for residences where multiple lines of evidence have demonstrated the absence of a soil vapor migration pathway to indoor air and an EPMM is not required. GEI will also prepare Partial PSSs for residences where a Method 3 Risk Characterization, based on multiple rounds of sampling, indicated that concentrations of chlorinated VOCs in indoor air constitute NSR, and the feasibility evaluation demonstrated that installation of an EPMM was infeasible. In addition, GEI will prepare a Partial PSS without Conditions for the portion of the Site occupied by public rights-of-way. During the reporting period, a Partial PSS without Conditions was submitted for 152-154 Glen Street. The properties that have achieved a Partial PSS without Conditions are shown in Fig. 6-3.

6.6.2 Permanent Solution with Conditions

GEI will attempt to record an AUL at each property with an Option 1, 2 or 3 EPMM to maintain the integrity of the EPMM. After an AUL is recorded, GEI will prepare a Partial PSS with Conditions for residential properties with Option 1, 2 or Option 3 EPMMs where 2 years of post-installation indoor air samples have demonstrated that the EPMM is effective. Following the post-installation indoor air sampling, GEI will continue annual inspections of Option 1, 2 and 3 EPMMs as provided for in the Phase IV RIP. The properties that have achieved a Partial PSS with Conditions are shown in Fig. 6-3. If a property owner does not execute an AUL, inspections will continue as Phase V activities.

6.7 Future Phase V Activities

6.7.1 EPMM Operation and Monitoring

The results of post-EPMM installation indoor air sampling indicate that the Option 1, 2, and 3 EPMMs installed at the Site have achieved the remedial objectives.

GEI will continue to conduct annual OMM activities for installed EPMMs where sufficient indoor air sampling has been conducted, but not repeat indoor air testing, to confirm it is achieving the remedial design objectives.

GEI has been communicating with property developers for 31 Tufts Street and 121 Washington Street. An EPMM has been installed at 31 Tufts Street and an EPMM is planned to be installed at 121 Washington Street. GEI will plan with the property owners to continue the operation and monitoring program outlined in Section 6.3 and Section 6.4.

6.7.2 EPMM Modifications

As discussed in Section 6.1, the properties at 103 Washington Street and 105 Washington Street are mixed-use redevelopments with commercial space and open-air parking on the first floor and residential units above. The pre-existing buildings at both properties have been demolished and the AEPMM previously at 103 Washington Street has been removed.

As discussed in Section 6.3, remote telemetry has been installed at each Option 1 EPMM except for 9 Knowlton Street. The owner of 9 Knowlton Street has been unresponsive to telemetry access request letters, telephone calls, and property visits. Therefore, it is infeasible to install telemetry at the property at this time.

6.7.3 EPMM Closure Sampling

As discussed in Section 6.3.2 and 6.3.3, GEI collected indoor air samples from 13 Knowlton Street in February 2018, March 2019, November 2019, and January 2023 and from 9 Knowlton Street in June 2022, January 2023, and March 2023 to demonstrate that the Option 1 EPMM is not required to maintain a condition of NSR.

Based on the results of the Option 1 EPMM closure sampling, GEI will continue to evaluate the need for an AEPMM to achieve a condition of NSR at 9 Knowlton and 13 Knowlton Street.

6.7.4 Installation of New EPMMs

GEI is communicating with property developers at 121 Washington Street concerning vapor mitigation controls that will be incorporated into the new proposed buildings at those properties.

6.7.5 AULs and Permanent Solutions

As discussed in Section 6.6., the source of contamination at the Site has been controlled. If post-installation indoor air sampling at a property demonstrates that an EPMM continues to achieve the remedial objectives, then that property is eligible for a Partial PSS with Conditions.

GEI anticipates recording AULs for each property where an EPMM is installed and a Partial PSS with Conditions is to be issued.

Once the AULs are recorded, GEI will prepare a Partial PSS with Conditions for the properties with EPMMs. As discussed in Section 6.6.1, GEI will prepare Partial PSSs for those properties that did not require mitigation.

6.7.6 Future Residential Monitoring

As discussed in Section 1.4., GEI continues to attempt to contact new property owners in the Tufts Street neighborhood as property ownership turnover occurs. To that effect, GEI has pursued contact with the new owner of 84 Franklin Street to conduct indoor air and sub-slab soil vapor monitoring at the property during the heating season of winter 2023/2024. Efforts have also been made to contact the homeowner of 97 Franklin Street to conduct indoor air and sub-slab soil vapor monitoring without success to date. These efforts are documented in Appendix B.

7. 60 Tufts Street

7.1 Background

60 Tufts Street is a 17-unit condominium building adjacent to the Property. The mitigation system at 60 Tufts Street was designed and constructed as an SSDS. The SSDS includes 12 vertical sub-slab extraction points and 2 horizontal foundation wall extraction points connected to 2 collection headers and a 5-horsepower regenerative blower with pressure gauges, controls, and particulate filter housed in a locked metal enclosure. GEI began operation of the SSDS on April 24, 2009. A discharge pipe extends from the blower through a parking garage deck and discharges above the roofline of the building.

On July 24, 2015, remote telemetry was installed at 60 Tufts Street. The remote telemetry consists of one radio node and one pressure switch connected to the blower to send notification of a system shut down remotely to the wireless remote monitoring hub located at the Property.

The system does not include off-gas treatment. Based upon the measured flow rate and VOC concentrations, the annual discharge rate of VOCs from the system will be significantly less than 100 lbs per year; therefore, no off-gas treatment is required per MassDEP Policy No. WSC-94-150.

7.2 Remedial Objectives

The objectives of the SSDS at 60 Tufts Street are to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for occupants of the condominium building.

7.3 Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP, and in accordance with the requirements and schedule presented in subsequent Phase IV Status Reports, and the Phase IV FIR/Phase V ROS.

Operational parameters for the system (e.g., flow rate, vacuum) were historically monitored monthly and indoor air quality in Units 1, 4, and 5 and sub-slab conditions were monitored for 2 years following installation of the EPMM. The Phase IV RIP provided for ongoing annual indoor air sampling. However, post-EPMM indoor air sampling and visual inspections confirmed that the EPMM at 60 Tufts Street has been constructed in accordance

with the Phase IV RIP and has achieved the remedial design objectives. Accordingly, GEI no longer conducts annual indoor air testing, but has continued to monitor operational parameters of the system.

Once remote telemetry was installed on the system on July 24, 2015, GEI began to perform monitoring of system parameters on a quarterly basis in July 2015. Inspection and monitoring at 60 Tufts Street was performed two times from June to December 2023. On October 18, 2023, the system at 60 Tufts Street shutdown, assumed due to a power failure; GEI restarted the system on October 20, 2023. A summary of monitoring activities conducted during this reporting period is provided in Table 7-1 and the Field Monitoring Forms are provided in Appendix F.

7.4 Performance Efficiency and Effectiveness

As presented in the Phase IV RIP and Phase IV FIR/Phase V ROS reports, the SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences nearly the entire floor slab area. Indoor air samples were collected in Units 1, 4, and 5, which are the units closest to the ground floor, for 2 years after EPMM installation. The indoor air testing results indicated that a condition of NSR has been achieved for building occupants at 60 Tufts Street and the soil vapor migration pathway to indoor air has been mitigated to the extent feasible.

7.4.1 AEPMM Closure Testing

On March 20, 2018, a shutdown valve was installed on the SSDS riser pipe at 60 Tufts Street. To simulate conditions without operation of the AEPMM, the SSDS fan was turned off and the shutdown valve was closed for one week beginning on April 17, 2019, prior to collecting soil vapor and indoor air samples. After the indoor air sampling was completed, the shutdown valve was opened, and the blower was reactivated. The results of the indoor air and soil vapor sampling were presented in Phase V Status Report #16.

7.5 Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the cleanout drains for the sub-surface header pipes, or in the moisture separator installed as part of the blower assembly. If observed, the liquid will be drained and dispensed to the bare ground surface at 60 Tufts Street so that it can infiltrate into the subsurface within the Site boundary.

7.6 System Modifications

No system modifications were made during the monitoring period.

7.7 Future Phase V Activities

The system is achieving the remedial design objectives and OMM activities will continue. To confirm system performance, GEI will continue to monitor operational parameters and sub-slab conditions (e.g., flow rate, vacuum) on a quarterly basis. During monitoring events, GEI will also perform maintenance tasks as needed, which may include documenting that the blower is in operation, draining accumulated water from the moisture separator or collection headers, changing the filter element for the blower, changing the batteries in the auto-dialer, and correcting any issues observed during routine inspection of system components. GEI will implement any modifications to the telemetry system that may be required.

7.7.1 EPMM Closure Sampling

Based on pre-EPMM indoor air testing at 60 Tufts Street, and changes to the toxicological characteristics for PCE, the EPMM may not be required to maintain a condition of NSR. GEI has communicated with the owners and occupants of 60 Tufts Street, who are amenable to EPMM closure indoor air testing.

In accordance with MassDEP's 2016 VI Guidance, GEI initiated a closure indoor air testing program at 60 Tufts Street during spring 2018, which is:

- Installing a shutdown valve on March 20, 2018 on the ventilation piping of the EPMM;
- Performing indoor air sampling at 60 Tufts Street in July 2018 and April 2019;
- Shutting down the SSDS fan for 7 days prior to indoor air sampling;
- Keeping the shutdown valve closed for 7 days prior to sampling to effectively prevent venting; and
- Following each sampling event, returning the system to normal operating conditions.

Testing was suspended during the COVID-19 pandemic. The unit that GEI had been testing (Unit #4) was sold and GEI has not been able to make contact with the new owner.

7.7.2 Longest Allowable Duration of AEPMM Shutdown

An operating regime for the 60 Tufts Street AEPMM was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR is 52 years for the 60 Tufts Street property.

7.7.3 Regulatory Closure

As discussed previously in Section 6.6, a Permanent Solution with Conditions can be achieved for properties where an AEPMM has achieved the remedial objectives, an AUL has been recorded for the property, and telemetry is installed. A Partial Permanent Solution Statement with Conditions may be submitted to achieve regulatory closure for 60 Tufts Street if the condominium association for the property executes an AUL. If the last round of shutdown testing demonstrates that an AEPMM no longer is required to maintain a condition of NSR, then a Partial Permanent Solution may be achievable without an AUL.

8. 50 Tufts Street Property

8.1 Background

The remedial system at the Property was originally designed and constructed as an SSDS that includes 22 sub-slab extraction points inside the building, a 15-horsepower regenerative blower with pressure gauges, controls, and particulate filter, and three 2,000-lb activated carbon absorbers operated in series for off-gas treatment. As part of the SSDS installation, the building slab was sealed to minimize vapor transmission through the slab. The cracks and joints in the building slab were filled with flexible sealant and a two-part epoxy coating was applied to the surface of the slab. GEI began operating the SSDS on April 30, 2007.

In July and August 2007, SVE components were added to the system as part of the CRA to address residual VOCs in soil. The SVE system includes seven SVE points installed below the pavement in the north and south parking lots on the Property. The SSDS and the SVE system rely upon shared equipment, including the piping manifold, blower assembly, and off-gas treatment units. GEI began operating the SVE system on August 22, 2007.

In April 2015, a wireless telemetry hub was installed at the Property. The telemetry hub receives telemetry notification from the other AEPMMs at the Site. A radio node was also installed and connected to monitor the 50 Tufts Street system.

8.2 Remedial Objectives

The design objectives of the combined SSDS/SVE system were to:

- Eliminate or mitigate, to the extent feasible, the soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for a commercial full-time worker.
- Reduce the mass of contaminants in the vadose zone.
- Control the potential migration of soil vapor from the Property to the 60 Tufts Street property.

8.3 Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP. Monitoring of the system was historically performed monthly; however, once telemetry was installed on the system, GEI began performing quarterly monitoring in July 2015. Operational parameters for the system (e.g., flow rate, vacuum, off-gas treatment

efficiency) were monitored six times from June 2023 to December 2023. GEI also measures the vapor pressure of sub-slab extraction points and monitoring points periodically. GEI uses these sub-slab pressure measurements to confirm system effectiveness. The pipe and hose connections on the pressure side of the blower are examined during monitoring visits for potential leaks. Leaks, if encountered, are corrected immediately. Carbon change-outs are scheduled based on carbon tank monitoring data to maximize VOC adsorption while maintaining compliance with regulatory requirements regarding discharge of VOCs to the atmosphere. Procedures to address potential spills of spent activated carbon during carbon change-outs have been developed and are presented in the system OMM Plan provided in the Phase IV RIP.

GEI performs monitoring for off-gas treatment efficiency monthly. Based on that monitoring, the system off-gas for the combined SSDS/SVE system was within permissible limits during the reporting period. A summary of monitoring activities during this reporting period is provided in Table 8-1, and Field Monitoring Forms are provided in Appendix F.

8.4 Performance Efficiency and Effectiveness

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS covers most of the building slab area. In conjunction with the physical sealing of the slab, this indicates the soil vapor migration pathway to indoor air is being mitigated by the system. Based on indoor air testing results collected since the combined system has been in operation, and the Method 3 risk characterizations prepared for the Site, a condition of NSR for full-time commercial workers has been achieved for the building at the Property.

The SVE system monitoring data show that vacuum influence from the SVE points in the south parking lot extends approximately 30 feet south of the building and from the SVE points in the north parking lot extends onto 60 Tufts Street.

Three influent and two effluent samples from the carbon treatment system were collected in May 2007, June 2007, and March 2008. The results of this sampling were compared with PID field measurements to estimate the total mass of VOCs removed from soil vapor between April 2007 and May 2014. However, GEI collected more recent influent and effluent samples in February 2014. The results of the February 2014 influent and effluent sampling are a better indicator of current system conditions and were used to estimate the total mass of VOCs removed from soil vapor based on PID field measurements beginning in June 2014. Monitoring data from both the SSDS and SVE components through December 15, 2023 show that approximately 9,410 lbs (approximately 699 gallons) of VOCs have been removed from the vadose zone at the Property (Fig. 8-1).

8.5 Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the moisture separator installed as part of the blower assembly. If observed, the liquid is drained from the moisture separator and dispensed to the bare ground surface at the Property so that it can infiltrate into the subsurface within the Site boundary.

Based on the previous quantities of spent carbon generated by the system, a 2021 Hazardous Waste Report was submitted to MassDEP on February 16, 2022, identifying the Property as a Large Quantity Generator (LQG) facility. GEI will submit the next biennial Hazardous Waste Report in early 2024.

Remediation waste generated during this reporting period consisted of 5,000 lbs of spent activated carbon. The carbon change-out occurred on July 21, 2023 and the spent carbon was delivered to US Ecology Burlington, Inc. of Burlington, Vermont. Disposal documentation for this reporting period is in Appendix H.

8.6 System Modifications

No system modifications were made during this reporting period.

8.7 Future Phase V Activities

The system is achieving the remedial design objectives. Phase V ROS OMM activities will continue in accordance with the requirements and schedule set forth in the Phase IV RIP.

8.7.1 Longest Duration of AEPMM Shutdown

An operating regime for the 50 Tufts Street AEPMMs was included in the Phase IV FIR/ Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system. Indoor air sampling performed at 50 Tufts Street by GeoInsight in September 2006 identified PCE concentrations ranging from 550 to 800 micrograms per cubic meter (µg/m3), and TCE concentrations ranging from 16 to 150 µg/m3. In accordance with the MassDEP Fact Sheet "TCE Toxicity Information: Implications for Chronic and Shorter-Term Exposure," dated March 27, 2014, the pre-EPMM concentrations in the building would pose an IH even over a short time period, such as a matter of days. However, GEI performed indoor air sampling during an unscheduled SSDS/SVE system shutdown in March 2015. The March 2015 indoor air concentrations did not pose an IH, and TCE was not detected during the March 2015 indoor air sampling. Based on system monitoring logs, the system was likely down for slightly less than 1 month during the March 2015 shut down. This information indicates that an IH would not be present during a minor shut down of the 50 Tufts Street system. Because the building is currently occupied, sampling cannot be conducted after the system has been

shut down for a full 60 days or longer, so the maximum duration for a system shutdown that might pose an IH is not known now.

GEI will continue to operate the AEPMM at 50 Tufts Street.

8.7.2 Property Boundary Soil Borings

To prepare for possible impacts to the City of Somerville Tufts Street Reconstruction Project, GEI will conduct a minimal soil boring program along the eastern property boundary of 50 Tufts Street to identify any potential shallow VOC contamination in soil. GEI will collect soil samples from borings located at the property boundary and building footprint on the northeast and southeast corners of the 50 Tufts Street building. Borings will be advanced to a depth of approximately 5 feet. Soil samples will be collected for VOC analysis and submitted to Alpha Analytical of Westborough, MA.

8.7.3 Monitoring Well Reinstallation

To continue to monitor trends in groundwater elevation and flow direction in the area, GEI plans to install monitoring wells MW203R and SH-MW-2R to replace monitoring wells MW203 and SH-MW-2 which were destroyed during the GLX construction project. The wells will be installed at the same screen interval depth as their predecessors. The wells were located historically on the southeastern portion of the 50 Tufts Street property and the replacement wells will be included in future groundwater gauging events.

9. Monitored Natural Attenuation

9.1 MNA Program Objectives

MNA is part of the remedial strategy to reach a Permanent Solution for the Site. GEI has implemented an MNA program to confirm on-going natural attenuation is occurring at the Site. The MNA program is described in the MNA OMM Plan presented in the Phase IV RIP. The primary elements of the MNA program include:

- Plume Stability Monitoring: A groundwater sampling plan to monitor overburden and bedrock groundwater plume concentrations through time to confirm that the groundwater plumes are stable, and that overall groundwater concentrations of chlorinated VOCs are not increasing.
- Natural Attenuation Evaluation: An evaluation of overburden and bedrock groundwater plume concentrations through time for indications of the presence and rate of natural attenuation processes.

9.2 MNA Activities

GEI conducted the following MNA activities during the reporting period:

- Groundwater Level Measurements: GEI measured groundwater levels at monitoring wells shown in Table 9-1.
- Groundwater Sampling: GEI collected groundwater samples from 4 monitoring wells in November 2023 and submitted them for chemical testing for VOCs by EPA Method 8260B. The sampling locations are shown in Fig. 4-1, the chemical testing results are shown in Table 4-2, and the laboratory data reports are in Appendix D.

GEI evaluated the groundwater chemical testing results collected during MNA activities to update and supplement the plume stability monitoring and natural attenuation evaluation, as presented in the Phase II CSA / Phase III RAP report. GEI also collected one groundwater sample from MW108 in September 2023. During this reporting period, semi-annual groundwater sampling was conducted by GEI at 5 monitoring wells shown in Fig. 4-1.

Based on an analysis of the Mann-Kendall statistical trend test results, which incorporates the additional groundwater testing data, the PCE, TCE, and TCA groundwater plumes continue to be stable.

GEI has been monitoring concentration fluctuations in groundwater PCE concentrations in monitoring wells MW122 and MW112A, and TCE concentrations in monitoring wells

MW118D and MW121D. The concentrations increased slightly in MW121D, MW112A, and MW118D. Concentrations of PCE and TCE demonstrate an increasing trend in MW122. These results are generally within a range of fluctuation that is consistent with continuing plume stability, particularly when considered in context with prior groundwater results from all monitoring wells. There has been an increase in PCE and TCE concentrations in overburden monitoring well MW122 (1,600 µg/L and 200 µg/L, respectively in November 2023) particularly over the past five years. However, downgradient overburden monitoring wells MW118S and MW121S remain non-detect for PCE and TCE, suggesting that the plume remains stable despite increased concentrations at MW122. During September 2023 groundwater sampling, MW-108 was non-detect for PCE, TCE, and TCA. GEI will perform additional groundwater sampling of these monitoring wells in spring 2024.

GEI will investigate potential utilities in Franklin Street that may be contributing to a preferential pathway for contaminant migration. MW122 is adjacent to 97 Franklin Street. While historic soil vapor and indoor air monitoring at the property did not warrant the installation of an EPMM, GEI has contacted the homeowner at 97 Franklin Street via certified letter twice for access to the property to return and conduct soil vapor and indoor air monitoring at the residence. Additionally, GEI visited the property on October 11, 2023 and knocked on the door; at the time of our visit nobody answered the door. GEI will continue to attempt to contact the resident and owner at 97 Franklin Street.

10. Remedial Monitoring Report No. 40

Remedial Monitoring Report No. 40, documenting OMM activities for active remedial systems at the Site, is presented in the BWSC-108A and 108B Transmittal Forms in Appendix A.

11. References

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GEI (2007). IRA Plan Modification No. 1, 50 Tufts Street, Somerville, MA, RTN 3-26114, dated April 12, 2007.

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GEI (2007). Remedial Monitoring Report No. 1, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 30, 2007.

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GEI (2007). Monthly Remedial Monitoring Report No. 7B, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated November 8, 2007.

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TRC (2020). Release Abatement Measure Status Report #2, 132 Washington Street, Somerville, MA, dated May 15, 2020.

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TRC (2021). Contained-In Determination Soil from Site RTN 3-34742 (Downgradient Property Status from RTN 3-23246), 132 Washington Street, Somerville, MA, dated November 15, 2021.

TRC (2021). Contained-In Determination Sediment from Site RTN 3-34742 (Downgradient Property Status from RTN 3-23246), 132 Washington Street, Somerville, MA, dated December 17, 2021.

TRC (2022). Contained-In Determination Sediment from Site RTN 3-34742 (Downgradient Property Status from RTN 3-23246), 132 Washington Street, Somerville, MA, dated January 20, 2022.

TRC (2022). Contained-In Determination Sediment from Site RTN 3-34742 (Downgradient Property Status from RTN 3-23246), 132 Washington Street, Somerville, MA, dated March 3, 2022.

TRC (2022). Contained-In Determination Sediment from Site RTN 3-34742 (Downgradient Property Status from RTN 3-23246), 132 Washington Street, Somerville, MA, dated April 25, 2022.

TRC (2022). Release Abatement Measure Status Report #6, 132 Washington Street, Somerville, MA, dated May 6, 2022.

TRC (2022). Release Abatement Measure Status Report #7, 132 Washington Street, Somerville, MA, dated October 6, 2022.

TRC (2023). Release Abatement Measure Status Report #8, 132 Washington Street, Somerville, MA, dated May 15, 2023.

TRC (2023). Release Abatement Measure Status Report #9, 132 Washington Street, Somerville, MA, dated November 8, 2023.

TRC (2022). Contained-In Determination Sediment from Site RTN 3-34742 (Downgradient Property Status from RTN 3-23246), 132 Washington Street, Somerville, MA, dated November 17, 2022.

Weston & Sampson (2019). Downgradient Property Status Submittal, 132 Washington Street, Somerville, MA, RTN 3-34742, dated June 2019.

Tables

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling		
5/23/2006	SH-MW1, SH-MW2, SH-MW3, GEO-1, GEO-2, MW-1, MW-	NA
5/24/2006	GEO-3, GEO-4, GEO-5, GEO-6, MW101, MW102 MW103,	Field Duplicate of GEO-3
5/25/2006	SH-4	NA
Groundwater Sampling		
8/7/2006	MW103	NA
Quarterly Groundwater Sampling		
10/4/2006	SH-MW1, SH-MW2, SH-MW3, GEO-3 GEO-4, GEO-5 and	Field Duplicate MW900 (GEO-3)
10/5/2006	GEO-1, GEO-2, MW101, MW102, MW103, MW104 and	NA
Quarterly Groundwater Sampling		
1/16/2007	SH-MW1, SH-MW2, GEO-3, GEO-4, GEO-5, GEO-6,	Field Duplicate MW900 (GEO-6)
1/17/2007	SH-MW3, MW-1, MW-3, GEO-1 and GEO-2	Field Duplicate MW800 (GEO-1)
1/18/2007	MW103, MW106, MW107, MW108, MW109, MW110 and	NA
Groundwater Sampling		
2/20/2007	MW113 and MW114	NA
3/23/2007	MW112A, MW115R AND MW116	NA
Quarterly Groundwater Sampling		
4/12/07	SHMW1, SHMW3, GEO1, GEO2 and MW113	NA
4/13/07	GEO3, MW101, MW102, MW103, MW104, MW106,	Field Duplicate MW900 (MW101)
4/16/07	SHMW2, GEO4, GEO5, GEO6, MW105, MW108, MW109,	Field Duplicate MW901 (GEO6)
5/23/07	MWCS1	NA
Quarterly Groundwater Sampling		
7/18/2007	MW102, MW107, MW108, MW11, MW112A, MW113, MW114, MW115R, M2116 and MW117S	Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113) Field Duplicate MW901 (MW116)
7/19/2007	SHMW2, MW104, MW105, MW106, MW117T, MW117D,	NA
7/20/2007	MW118S, MW118T and MW118D	NA
Groundwater Sampling		
8/22/07	MW119S, MW119T, MW120S and MW120D	NA
8/30/07	MW118S, MW118T and MW118D	NA
Quarterly Groundwater Sampling		
10/10/2007	MW102, MW105, MW106, MW107, MW108, MW111, MW112A, MW113, MW114, MW115	Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113)
10/11/2007	MW117T, MW117D, MW118S, MW118T, MW118D	NA
10/12/2007	MW116, MW119S, MW119T, MW120S, MW120D, MW201,	Field Duplicate MW901 (MW116)
10/15/2007	MW104, MW117S	NA
10/22/2007	MW121S, MW121D	NA
Quarterly Groundwater Sampling		
1/9/2008	MW105, MW115	NA
1/10/2008	MW102, MW106, MW107, MW108, MW111, MW112A	Sample from MW102 was used for MS/MSD
1/11/2008	MW104, MW113, MW114, MW116, MW117S, MW118S, MW201, MW202	Field Duplicate MW900 (MW113) Field Duplicate MW901 (MW116)
1/15/2008	MW117T, MW117D, MW118T, MW119S, MW120S,	NA
1/16/2008	MW118D, MW119T	NA
1/17/2008	MW120D	NA
Groundwater Sampling		
1/30/2008	MW122	NA
Quarterly Groundwater Sampling		
4/15/2008	GEO-1, SH-MW3, MW3, MW104, MW113, MW116, MW201, MW202, MW203	Field duplicate MW113 (MW900) Field duplicate MW116 (MW901)
4/16/2008	MW117S, MW117T, MW117D, MW118T, MW118D,	NA
4/17/2008	MW102, MW106, MW107, MW108, MW109, MW111, MW112A, MW114, MW115R, MW120D, MW121S,	Sample from MW102 was used for MS/MSD
4/18/2008	MW105	NA

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling		
7/14/2008	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901)
7/15/2008	GEO-1, GEO-2, MW-3, MW104,MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D,	Sample from MW104 was used for MS/MSD
7/16/2008	MW116, MW117S, MW117T, MW117D, MW118D	NA
Quarterly Groundwater Sampling		
10/21/2008	MW104, GEO-1, GEO-2 MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW202, MW-3	Sample from MW104 was used for MS/MSD
10/22/2008	MW105, MW112A, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122	Field duplicate MW112A (MW901) Field duplicate MW121D (MW900)
Quarterly Groundwater Sampling		
4/15/2008	GEO-1, SH-MW3, MW3, MW104, MW113, MW116, MW201, MW202, MW203	Field duplicate MW113 (MW900) Field duplicate MW116 (MW901)
4/16/2008	MW117S, MW117T, MW117D, MW118T, MW118D,	NA
4/17/2008	MW102, MW106, MW107, MW108, MW109, MW111, MW112A, MW114, MW115R, MW120D, MW121S,	Sample from MW102 was used for MS/MSD
4/18/2008	MW105	NA
Quarterly Groundwater Sampling		
7/14/2008	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901)
7/15/2008	GEO-1, GEO-2, MW-3, MW104,MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D,	Sample from MW104 was used for MS/MSD
7/16/2008	MW116, MW117S, MW117T, MW117D, MW118D	NA
Quarterly Groundwater Sampling		
10/21/2008	MW104, GEO-1, GEO-2 MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW202, MW-3	Sample from MW104 was used for MS/MSD
10/22/2008	MW105, MW112A, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122	Field duplicate MW112A (MW901) Field duplicate MW121D (MW900)
Quarterly Groundwater Sampling		
1/12/2009	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901)
1/13/2009	GEO-1, GEO-2, MW117S, MW117T, MW117D, MW119S,	NA
1/14/2009	MW104, MW-3, MW116, MW118S, MW118T, MW118D	Sample from MW104 was used for MS/MSD
Quarterly Groundwater Sampling		
4/13/2009	GEO-1, GEO-2, MW105, MW112A, MW119S, MW119T, MW121S, MW121D, MW122	Field duplicate MW121D (MW900) Field duplicate MW112A (MW901)
4/14/2009	MW-3, MW104, MW117S, MW117T, MW117D, MW118T,	NA
4/15/2009	MW102, MW116, MW118S	NA
Quarterly Groundwater Sampling		
7/14/2009	MW105, MW112A, MW116, MW118T, MW121S, MW121D, MW202	Field duplicate MW121D (MW900) Field duplicate MW112A (MW901)
7/15/2009	GEO-1, GEO-2, MW-3, MW104,MW117S, MW117T, MS117D, MW118S, MW118D, MW119S, MW119T,	Sample from MW104 was used for MS/MSD
Quarterly Groundwater Sampling		
10/14/2009	GEO-1, GEO-2, MW104, MW105, MW112A, MW116, MW117S, MW117D, MW118S, MW118D, MW121S,	Field duplicate MW112A (MW900) Field duplicate MW118D (MW901)
10/15/2009	MW119T, MW119S, MW120S, MW120D, MW118T	Sample from MW104 was used for MS/MSD
10/16/2009	MW117T, MW3	
Annual Groundwater Sampling		
4/12/2010	MW104, MW105, MW112A, MW118S, MW118T, MW118D, MW121S, MW121D, MW122, MW202	Field duplicate MW112A (MW900) Sample from MW104 was used for MS/MSD
4/13/2010	GEO-1, GEO-2, SH-MW3, MW116, MW117S, MW117T, MW117D, MW119S, MW119T, MW120S, MW120D	Field duplicate MW116 (MW901)
Semi-Annual Groundwater Sampling		
10/27/2010	MW112A, MW122	NA

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Annual Groundwater Sampling		
4/20/2011	MW105, MW112A, MW117D, MW118S, MW118T,	Field duplicate MW112A (MW900)
4/21/2011	GEO-2, SH-MW3, MW104, MW116, MW117S, MW117T	Field duplicate MW116 (MW901) Sample from MW104 was used for MS/MSD
4/22/2011	GEO-1, MW119S, MW119D, MW120S, MW120D, MW202	
Semi-Annual Groundwater Sampling		
11/16/2011	MW112A, MW122	NA
Annual Groundwater Sampling		
4/16/2012	SH-MW-3, MW112A, MW117S, MW117T, MW117D, MW118D, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D	Field duplicate MW112A (MW900)
4/17/2012	GEO-1, MW104, MW105, MW116, MW118T, MW122, MW202	Field duplicate MW116 (MW901) Sample from MW104 was used for MS/MSD
Semi-Annual Groundwater Sampling		
11/12/2012	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/23/2013	SH-MW-3, MW105, MW117T, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122, MW202	NA
4/24/2013	GEO-1, MW104, MW112A, MW116, MW117S, MW117D, MW118S, MW118T, MW118D	Field duplicate MW116 (MW900) Field duplicate MW112A (MW901) Sample from MW104 was used for MS/MSD
5/1/2013	GEO-2	
Semi-Annual Groundwater Sampling		
11/18/2013	MW112A, MW118D, MW121D, MW122	NA
Kleinfelder Groundwater Sampling		
2/6/2014	KE-114-140206, KE-115-140206, KE-116-140206, KE-117-140206, MW-SR-140206, WashSW-140206	Sample from WashSW-140206 was a grab sample from the base of an open excavation.
4/8/2014	KE-202D, KE-202S	NA
4/9/2014	KE-117	NA
4/14/2014	KE-204, KE-206, KE-208	NA
4/15/2014	KE-205, KE-207, KE-209, KE-210	NA
Annual Groundwater Sampling		
4/30/2014	MW104, MW121S, MW121D, MW122, SH-MW-3, GEO-1, GEO-2	Sample from MW104 was used for MS/MSD
5/1/2014	MW117S, MW117T, MW117D, MW118S, MW118D, MW118T, MW119S, MW119T, MW120S, MW120D, MW116	Field duplicate MW116 (MW900)
6/11/2014	MW112A	NA
Semi-Annual Groundwater Sampling		
11/18/2014	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/2/2015	MW104, MW116, MW117S, MW117T, MW117D, MW118S, MW118D, MW119S, MW119T, MW121S, MW121D, MW122, SH-MW-3, GEO-1, GEO-2	Sample from MW104 was used for MS/MSD Field duplicate MW116 (MW901)
4/3/2015	MW118T, MW120S, MW120D	
4/17/2015	MW112A	Field duplicate MW112A (MW900)
Semi-Annual Groundwater Sampling		
11/19/2015	MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/28/2016	MW1112A, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122, GEO-1	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from MW104 was used for MS/MSD
4/29/2016	MW104, MW116, MW202, GEO-2	

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Semi-Annual Groundwater Sampling		
11/21/2016	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/17/2017	MW104, MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW121S, MW121D, MW122, MW202, GEO-1	Field duplicate MW116 (MW900) Field duplicate MW112A (MW901) Sample from MW104 was used for MS/MSD
4/18/2017	MW112A, MW119S, MW119T, MW120S, MW120D, GEO-2	
4/28/2017	SH-MW-2, MW104	
Semi-Annual Groundwater Sampling		
11/8/2017	MW118D, MW121D, MW122	
11/10/2017	MW112A	NA
Annual Groundwater Sampling		
4/3/2018	MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW119S, MW119T, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from MW104 was used for MS/MSD
4/4/2018	GEO-1, GEO-2, MW104, MW112A, MW116, MW120S, MW120D, MW202, SH-MW-2	
Semi-Annual Groundwater Sampling		
11/15/2018	MW 112A MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/15/2019	MW112A, MW117S, MW117T, MW117D, MW118S, MW118D, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from SHMW2 was used for MS/MSD
4/16/2019	MW116, MW118T, MW119S, MW119T, MW120S, MW120D, MW202, SHMW2, GEO-1, GEO-2	
Semi-Annual Groundwater Sampling		
11/23/2019	MW 112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling		
4/16/2020	MW112A, MW117S, MW117T, MW117D, MW118S, MW118D, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from MW202 was used for MS/MSD
4/17/2020	MW116, MW118T, MW119S, MW119T, MW120S, MW120D, MW202, GEO-1, GEO-2	
Semi-Annual Groundwater Sampling		NA
11/18/2020	MW 112A, MW118D, MW121D, MW122	
Annual Groundwater Sampling		
4/13/2021	MW112A, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/14/2021	MW116, MW119S, MW119T, MW120S, MW120D, MW202, GEO-1, GEO-2	
Semi-Annual Groundwater Sampling		NA
11/30/2021	MW 112A, MW118D, MW121D, MW122	
Annual Groundwater Sampling		
4/12/2022	MW118S, MW118T, MW118D, MW117T, MW117S, MW117D	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/13/2022	MW120S, MW120D, MW119S, MW119T, MW121S, MW121D, GEO-1, MW122, MW202, MW116	
4/14/2022	GEO-2 and MW112A	
Semi-Annual Groundwater Sampling		NA
11/29/2022	MW 112A, MW118D, MW121D, MW122	

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Annual Groundwater Sampling		
4/17/2023	MW118S, MW118T, MW118D, MW117T, MW117S, MW117D, MW122, MW119S, MW119T	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/18/2023	MW120S, MW120D, MW121S, MW121D GEO-1, GEO-2, MW202, MW116	
5/11/2023	MW112A	
Additional Sampling for PSS		
9/15/2023	MW108	NA
Semi-Annual Groundwater Sampling		
11/7/2023	MW 112A, MW118D, MW121D, MW122	NA

General Notes:
1. NA = not applicable.
2. QA/QC = quality assurance/quality check.
3. MS/MSD = matrix spike/matrix spike duplicate.
4. VOC = volatile organic compound.
5. All groundwater samples submitted for VOC testing. Selected samples collected in January 2007, April 2010, April 2011, April 2012, April 2013, April 2014, May 2014, June 2014, April 2015, April 2016, April 2017, April 2018, April 2019, April 2020, April 2021, April 2022, and April and May 2023 were also submitted for natural attenuation parameter testing.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			GEO-1																										GEO-2									
Sample Name:			GEO-1	GEO-1	GEO-1	GEO-1	MW800 (FD)	GEO1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-2	GEO-2	GEO-2	GEO-2	GEO2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sample Date:			8/16/04	5/23/06	10/5/06	1/17/07	1/17/07	4/12/07	4/15/08	7/15/08	10/21/08	1/13/09	4/13/09	7/15/09	10/14/09	4/13/10	4/22/11	4/17/12	4/24/13	4/30/14	4/2/15	4/28/16	4/17/17	4/4/18	4/16/19	4/17/20	4/14/21	4/13/22	4/18/23	8/16/04	5/23/06	10/5/06	1/17/07	4/12/07	7/15/08	10/22/08	1/13/09	4/13/09	7/15/09
Collected By:			GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																				
Volatile Organic Compounds (VOCs)																																						
Acetone	8260	µg/l	< 400	< 5.0	< 5.0	< 5.0	< 5.0	9.7	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	<50	<10	<10	<10	<5.0	<5.0	<5.0	487	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0
Benzene			< 20	< 0.50	< 0.50	< 0.50	< 0.50	0.27 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	< 5.0	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<50	<10	<10	<10	<10	<10	<10	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	< 25	< 5.0	< 5.0	4.5 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 20	3.6	1.4	2.3	2.3	5.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 20	0.76 J	0.86 J	0.76 J	0.84 J	0.77 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 40	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<1.0	<1.0	<4.0	<2.0	<2.0	<2.0	< 10	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 20	< 1.0	< 1.0	0.60 J	0.61 J	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	0.62 J	< 1.0	0.60 J	
Chloromethane			< 40	< 2.0	3.7	< 2.0	1.8 J	6.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<1.0	<1.0	<4.0	<2.0	<2.0	<2.0	< 10	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 20	4.3	2.9	5.4	5.6	10.6	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	2.2	2.0	< 5.0	2.5	1.1	< 1.0	< 1.0	0.29 J	< 1.0
1,2-Dichloroethane			< 20	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	13.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			39.8	989	1330 E	247	241	8980	3.0	26.2	1.4	1.3	1.7	< 1.0	2.0	< 1.0	7.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	23.2	14.2	26.3	25.2	11.5	13.4	8.4	7.0	17.0	6.5
cis-1,2-Dichloroethylene			< 20	4.3	2.3	3.3	< 1.0	8.7	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	1.6	9.0	< 1.0	< 1.0	< 1.0	2.8	< 1.0	
trans-1,2-Dichloroethylene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			NT	< 25	< 25 R	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	367	< 25	< 50	< 25 K-	< 25	< 100	<630	<130	<130	<500	<250	<250	<250	NT	< 25	< 25 R	< 130	< 25	< 25	< 25 J+	< 25	< 25	
Ethylbenzene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	0.41 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	3.1 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<25	<5.0	<5.0	<10	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			< 20	64.2	5.3 J+	2.5	2.7	6.9 J+	7.9	< 1.0	< 1.0	0.26 J	1.1	< 1.0	4.8	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<4.0	<2.0	<2.0	<2.0	37.6	79.9	12.8 J+	9.8	16.5	< 1.0	5.9	0.45 J	< 1.0	0.29 J
Methylene chloride			< 200	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 K-	< 2.0	< 2.0	< 2.0	<10	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	< 5.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<25	<5.0	<5.0	<4.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	8.3 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+
Tert-amyl methyl ether			NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<10	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 20	5.7	3.0 J	5.7	5.8	15.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			1880	18600	19500	17300	18000	48500	135	268	115	76.1	64.3	71.5	698	79.2	2580	171	85.1	252	162	134	1340	70.9	32.9	240	48	25	23	285	131	693	1420	120	115	140	110	263 G	202
Tetrahydrofuran			NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 G	< 10	< 10	<50	<10	<10	<4.0	<2.0	<2.0	<2.0	NT	< 10	< 10	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 20	1.2	0.72 J	1.1	0.99 J	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	3.4 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			1720	19100	9620 J+	13300	14200	42500 J+	29.5	217	8.5	9.2	10.0	5.9	16.6 J+	7.0	12.2	3.7	2.1	2.3	3.0	1.3	9.1	<1.0	<1.0	5.8	<1.0	<1.0	<1.0	490	125	376	867	147 J+	70.5	25.5	22.5	110	29.7
1,1,2-Trichloroethane			< 20	< 1.0	< 1.0	0.94 J	0.99 J	3.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			898	10000	5530	9090	9660	30600	18.9	70.6	11.0	8.9	8.0	10.1	31.2	8.2	35.6	6.5	4.8	5.9	7.1	5.4	2.2 J	3.60	1.90	3.0	1.7	2.00	2.1	60	27.3	170	602	36.0	22.8	20.9	19.7	99.7	31.7
Vinyl chloride			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 40	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<4.0	<2.0	<2.0	<2.0	< 10	< 1.0	< 1.0	11.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			ND	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<5.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	ND	< 1.0	< 1.0	14.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																< 10							
Iron																																< 100							
Manganese																																NT							
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																							
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																														< 10							
Ethane	8015	µg/l																														< 10							
Ethylene	8015	µg/l																														< 10							
Alkalinity	E310.1	µg/l																														104000							
Chloride	E325.3	µg/l																														1310000							
Chlorine, Total Residual	E330.4	µg/l																														NT							
Iron, Ferrous	3500FE B	µg/l																														NT							
Nitrate & Nitrite as N	E353.2	µg/l																														7000							
Nitrogen, Nitrate	E353.2	µg/l																														7000							
Nitrogen, Nitrite	E354.1	µg/l																														< 10							
Sodium	6010C	µg/l																														NT							
Sulfate	E375.4	µg/l																														88000							
Sulfide	E376.1	µg/l																														< 2000							
Surfactants	E425.1	µg/l																														< 100							
Total Organic Carbon	E415.1	µg/l																														< 1000							

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			GEO-2																				GEO-3							GEO-4					
Sample Name:			GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	MW901 (FD)	GEO-2	GEO-2	MW901 (FD)	GEO-2	MW901 (FD)	GEO-2	MW901 (FD)	GEO-2	MW901	GEO-2	MW901	GEO-2	MW901	GEO-3	GEO-3	MW900 (FD)	GEO-3	MW900 (FD)	GEO-3	GEO3	GEO-4	GEO-4	GEO-4	GEO-4	GEO4
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19
Sample Date:			10/14/09	4/13/10	4/21/11	5/1/13	4/30/14	4/2/15	4/29/16	4/29/16	4/18/17	4/4/18	4/4/2018	4/16/2019	4/16/2019	4/17/2020	4/17/2020	4/14/2021	4/14/2021	4/14/2022	4/14/2022	4/18/2023	4/18/2023	8/16/04	5/24/06	5/24/06	10/4/06	10/4/06	1/16/07	4/13/07	8/16/04	5/24/06	10/4/06	1/16/07	4/16/07
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	Geolnsight	GEI	GEI	GEI	GEI	GEI	GEI	Geolnsight	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																	
Volatile Organic Compounds (VOCs)																																			
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 1000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 5.0	< 5.0	< 100	< 50
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 100	< 0.50	< 0.50	< 10	< 5.0
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1000	< 5.0	< 5.0	< 100	< 50
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 50
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 100	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 2.0	< 2.0	< 40	< 20
Chloroform			0.84 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.56 J	0.76 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	2.5	< 20	< 10
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 100	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 2.0	< 2.0	< 40	< 20
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	11.6	11.6	2.6	< 100	2.7	7.1	< 20	< 10
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
1,1-Dichloroethylene			10.8	13.8	3.7	7.8	3.8	3.1	4.3	4.9	1.5	1.1	1.1	<1.0	<1.0	2.3	2.6	1.7	1.8	2.6	2.3	3.3	2.7	108	< 1.0	< 1.0	59.3	59.1	11.5	1.4	< 100	6.1	17.8	< 20	< 10
cis-1,2-Dichloroethylene			< 1.0	3.1	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	2.8	2.6	1.2	< 1.0	< 100	6.3	16.7	< 20	5.5 J
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 100	< 2.0	< 2.0	< 40	< 20
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25 K-	< 25	< 25	< 25	<130	<130	<130	<130	<130	<250	<250	<250	<250	<250	<250	<250	<250	NT	< 25	< 25	< 25 R	< 25 R	< 25	< 25	NT	< 25	< 25 R	< 5.0	< 250
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1000	< 5.0	< 5.0	< 100	< 50
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 100	< 50
Methyl tert-butyl ether			0.56 J	< 1.0	< 1.0	4.5	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 1.0	< 1.0	1.2 J+	1.1 J+	< 1.0	< 1.0	< 100	< 1.0	1.5 J+	< 20	< 10
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 2.0	< 2.0	< 5.0	< 2.0	< 5.0	< 2.0	< 1000	< 2.0	< 2.0	< 40	< 20
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 100	< 50
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 40	< 20
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	0.84 J	< 100	< 50
Tetrachloroethylene (PCE)			167	480	66.4	140	119	76.3	147	145	50.7	48.5	45.4	26.3	25.6	120	130	86	86	96	84	120	120	4020	162	157	2720	2340	529	93.2	12900	6690	24100	16700	8240
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10 G	< 10	< 10	< 10	<10	<10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	NT	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 200	< 100
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	1.8	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
1,1,1-Trichloroethane (TCA)			37.5 J+	61.9	4.3	16.0	15.5	11.4	18.4	20.4	5.2	3.7	3.6	1.1	1.1	9.2	9.5	11	11	17	16	19	16	204	4.0	4.4	78.2 J+	77.2 J+	16.2	< 1.0	1170	113	321 J+	113	70.9
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
Trichloroethylene (TCE)			33.4	103	14.7	14.3	12.2	9.9	12.7	12.8	7.1	6.1	6.0	4.4	4.2	6.1	6.4	3.8	3.8	4.2	4.0	7.8	6.8	507	14.4	14.1	209	207	70.2	10.0	720	86.8	235	129	74.8
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 1.0	< 1.0	< 20	< 10
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	< 1.0	< 1.0	< 20	< 10
Metals (Total)	6010B	µg/l	NT							NT			NT		NT		NT		NT		NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic				NT	NT	NT	NT	NT	NT		NT	NT		NT		NT		NT		NT		NT													
Iron				< 100 J+	< 100	< 100	NT	NT	NT		NT	NT		NT		NT		NT		NT		NT													
Manganese				< 15	< 15	< 15	< 15	< 15	< 15		<15	<15		<15		<10		<10		<10		<10													
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																			
Others			NT							NT			NT		NT		NT		NT		NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l		1.58	< 0.30	< 0.30	< 10	< 10	< 10		<10	<0.11		0.14		<1.0		<2.00		<2.00		<2.00														
Ethane	8015	µg/l		< 0.10	< 0.10	< 0.10	< 10	< 10	< 10		<10	<0.23		<0.23		<0.5		<0.500		<0.500		<0.500														
Ethylene	8015	µg/l		< 0.10	< 0.10	< 0.10	< 10	< 10	< 10		<10	<0.31		<0.31		<0.5		<0.500		<0.500		<0.500														
Alkalinity	E310.1	µg/l		44100	50400	64600	69000	48400	50300		34000	32800		221000		28500		28,300		43,400		27,000														
Chloride	E325.3	µg/l		165000	53700	252000	175000	220000	290000		287000	254000		198000		420000		270,000		38,000		270,000														
Chlorine, Total Residual	E330.4	µg/l		< 50 A	< 50	< 50	< 50 A	< 50 A				1130		<100		<20		<20		<20		<20														
Iron, Ferrous	3500FE B	µg/l		NT	NT	NT	< 100	< 100	< 100		<100	<200		<200		<500		<500		<500		<500														
Nitrate & Nitrite as N	E353.2	µg/l		6700	4400	3300	1700	1600	1500		1700	2300		1700		630		1,400		770		3,000														
Nitrogen, Nitrate	E353.2	µg/l		6700	4400	3300	1700	1600	1500		1700	2300		1700		629		1,320		755		3,050														
Nitrogen, Nitrite	E354.1	µg/l		< 10	< 10	< 10	< 10	< 10	< 10		<10	<10		<10		<300		<300		564		<300														
Sodium	6010C	µg/l		NT	NT	NT	NT	NT	NT		NT	NT		NT		NT		NT		NT		NT														
Sulfate	E375.4	µg/l		117000	105000	67800	38900	27500	30900		21600	19000		15900		<10000		<10,000		<10,000		12000														
Sulfide	E376.1	µg/l		< 2000	< 2000	< 2000	< 2000	< 2000				<2000		<2000		<100		<100		<100		<100														
Surfactants	E425.1	µg/l		< 100	< 100	< 100	< 100	< 100	< 100		<100	<100		<100		<50		<50		<50		<50														
Total Organic Carbon	E415.1	µg/l		2400	4600	1700	1000	<5000	< 1000		<1000	1000		<1000		<500		<500		570		<500														

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			GEO-5					GEO-6							MW-1					MW101						MW102								MW103					
Sample Name:			GEO-5	GEO-5	GEO-5	GEO-5	GEO5	GEO-6	GEO-6	GEO-6	GEO-6	MW900 (FD	GEO6	MW901 (FD)	MW-1	MW-1	MW-1	MW-1	MW1	MW-101	MW101	MW101	MW101	MW900	MW-102	MW102	MW102	MW102	MW102	MW102	MW102	MW102	MW-103	MW103	MW103	MW-103	MW103	MW103
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	Unknown	Unknown	Unknown	Unknown	Unknown	9 to 19	9 to 19	9 to 19	9 to 19	9 to 19	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16	6 to 16
Sample Date:			8/16/04	5/24/06	10/4/06	1/16/07	4/16/07	8/16/04	5/24/06	10/4/06	1/16/07	1/16/07	4/16/07	4/16/07	7/1/02	8/9/04	5/23/06	1/17/07	4/17/07	5/24/06	10/5/06	1/17/07	4/13/07	4/13/07	5/24/06	10/5/06	1/16/07	4/13/07	7/18/07	10/10/07	1/10/08	4/17/08	5/24/06	8/7/06	10/5/06	1/16/07	1/18/07	4/13/07
Collected By:			GeoInsight	GEI	GEI	GEI	GEI	GeoInsight	GEI	GEI	GEI	1/16/07	GEI	4/16/07	SHA	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																				
Volatile Organic Compounds (VOCs)																																						
Acetone	8260	µg/l	< 2000	< 5.0	< 5.0	< 250	< 5.0	< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.000	< 40000	40.0	36.1	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
Benzene			< 100	< 0.50	< 0.50	< 25	< 0.50	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 5.00	< 2000	2.0	< 0.50	< 250	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5
Bromodichloromethane			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
2-Butanone (MEK)			< 1000	< 5.0	< 5.0	< 250	< 5.0	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.000	< 4000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	0.81 J	< 5.0	< 10	< 5.0	< 5.000	< 10000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
Carbon tetrachloride			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 2000	19.0	22.4	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
Chlorobenzene			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 2000	1.1	1.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
Chloroethane			< 200	< 2.0	< 2.0	< 100	< 2.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 10000	< 4000	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
Chloroform			< 100	< 1.0	0.62 J	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 7500	< 2000	3.7	1.6	< 500	1.8	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.65 J	0.62 J	< 5.0
Chloromethane			< 200	< 2.0	< 2.0	< 100	< 2.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 25000	< 4000	< 2.0	14.6	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
1,4-Dichlorobenzene			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 25000	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
1,1-Dichloroethane			< 100	3.0	9.7	< 50	< 1.0	< 10	2.0	4.4	1.7	1.6	0.92 J	1.1	< 7500	< 2000	59.8	59.9	< 500	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	0.88 J	< 1.0	< 1.0	0.42 J	2.1	4.1	0.51 J	27.2	3.7	13.0	11.5	10.1	7.9
1,2-Dichloroethane			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 2000	4.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	3.9 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
1,1-Dichloroethylene			< 100	8.9	32.7	< 50	< 1.0	< 10	4.6	11.0	4.4	3.2	2.8	3.8	< 5.00	< 2000	11500	1260	2290	8.7	21.1	14.1	< 1.0	4.6 G	6.3	50.2	30	< 1.0	23.6	39.7	51.8	22.2 C+	13.4	2.0	6.5	4.3	4.3	8.0
cis-1,2-Dichloroethylene			< 100	12.5	35.2	< 50	< 1.0	14.8	9.1	15.4	7.7	6.9	5.3	6.3	< 5.00	< 2000	24.3	7.7	< 500	< 1.0	< 1.0	1.3	< 1.0	2.1 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	3.0	2.5	< 1.0	< 1.0	< 5.0
trans-1,2-Dichloroethylene			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 7500	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
1,2-Dichloropropane			< 100	< 2.0	< 2.0	< 100	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 18000	< 2000	4.5	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
1,4-Dioxane			NT	< 25	< 25 R	< 1300	< 25	NT	< 25	< 25	< 25 R	< 25	< 5.0	< 25	NT	NT	< 25 R	< 25	< 13000	< 25	< 25 R	< 25	< 25	< 25	< 25	< 25 R	< 25	< 25	NT	< 50	< 25	< 25	< 25	< 25 R	< 25	< 25	< 25	< 130
Ethylbenzene			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 2000	2.8	4.4	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
2-Hexanone			< 1000	< 5.0	< 5.0	< 250	< 5.0	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.000	< 20000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
4-Isopropyltoluene			< 100	< 5.0	< 5.0	< 250	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.00	< 2000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
Methyl tert-butyl ether			< 100	1.3	3.3 J+	< 50	< 1.0	< 10	1.3	1.9 J+	1.2	1.2	0.80 J	0.81 J	< 10000	< 2000	< 1.0 J+	< 1.0	< 500	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	4.5 J+	2.7	< 1.0	NT	17.3	24.2	1.7 C+	< 1.0	< 1.0	0.65 J J+	< 1.0	< 1.0	< 5.0
Methylene chloride			< 1000	< 2.0	< 2.0	< 100	< 2.0	< 100	< 2.0	< 2.0	< 2.0	1.3 J	2.5 J	< 2.0	< 5.000	< 20000	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	4.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
Naphthalene			< 100	< 5.0	< 5.0	< 250	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.000	< 2000	< 5.0	2.4 J	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
Tert-amyl methyl ether			NT	< 2.0	< 2.0	< 100	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	NT	NT	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
1,1,1,2-Tetrachloroethane			< 100	< 5.0	< 5.0	< 250	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.00	< 2000	38.1	22.8	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 25
Tetrachloroethylene (PCE)			14400	2440	12900	254 F+	17.9	782	675	1980	632	594 F+	618	497	52000	24200	34400	74900	49600	163	171	192	94.0	90.7	200	898	692	20.3	524	685	606	438 C+	2600	592	1510	1200 F+	1250 F-	1510
Tetrahydrofuran			NT	< 10	< 10	< 500	< 10	NT	< 10	< 10	< 10	< 10	< 20	< 10	NT	NT	< 10	< 10	< 5000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 50
Toluene			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 7500	< 2000	19.6	15.3	< 500	< 1.0	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
1,1,1-Trichloroethane (TCA)			646	246	652	< 50	< 1.0	27.8	42.5	77.2 J+	33.7	25.3	21.2	26.8	290000	112000	255000	135000	151000	110	146	131	50.5 J+	43.0 J+	< 1.0	65.7 J+	32.6	< 1.0	26.3	69.8	121	21.9 C+	34.0	4.4	14.4 J+	17.6	21.0	< 5.0
1,1,2-Trichloroethane			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 7500	< 2000	85.8	16.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
Trichloroethylene (TCE)			404	146	446	< 50	< 1.0	122	78.8	131	75.3	56.5	55.5	70.5	220000	128000	175000	120000	103000	50.5	30.2	38.4	47.2	45.7	15.6	89.1	57.0	2.0	46.1	61.0	65.3	35.6 C+	109	24.0	60.4	37.0	38.0	58.7
Vinyl chloride			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10000	< 2000	< 1.0	1.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
m,p-Xylene			< 200	< 1.0	< 1.0	< 50	< 1.0	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 4000	4.8	5.9	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
o-Xylene			< 100	< 1.0	< 1.0	< 50	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 5.00	< 2000	9.2	13.8	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
Total Xylene			ND	< 1.0	< 1.0	< 50	< 1.0	ND	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	ND	ND	14.0	19.7	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic											< 10	< 10																									< 10	
Iron											< 100	< 100																									< 100	
Manganese											NT	NT																									NT	
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																						
Others			NT	NT	NT	NT	NT	NT	NT	NT			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l									< 10	< 10																									< 10	
Ethane	8015	µg/l									< 10	< 10																									< 10	
Ethylene	8015	µg/l									< 10	< 10																									< 10	
Alkalinity	E310.1	µg/l									134000	133000																									53500	
Chloride	E325.3	µg/l									825000	825000																									675000	
Chlorine, Total Residual	E330.4	µg/l									NT	NT																									NT	
Iron, Ferrous	3500FE B	µg/l									NT	NT																									NT	
Nitrate & Nitrite as N	E353.2	µg/l									3500	3500																									8900	
Nitrogen, Nitrate	E353.2	µg/l									3500	3500																									8900	
Nitrogen, Nitrite	E354.1	µg/l									< 10	< 10																									16	
Sodium	6010C	µg/l									NT	NT																									NT	
Sulfate	E375.4	µg/l									45800	45500																									65700	
Sulfide	E376.1	µg/l									< 2000	< 2000																									< 2000	
Surfactants	E425.1	µg/l									< 100	< 100																									< 100	
Total Organic Carbon	E415.1	µg/l									< 1000	< 1000																									1700	

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW104																						MW105											
Sample Name:			MW-104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW104	MW-105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105	MW105
Well Screen Interval (ft bgs):			5 to 15	5 to 15	6 to 16	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29
Sample Date:			5/23/06	10/5/06	1/16/07	4/13/07	7/19/07	10/15/07	1/11/08	4/15/08	7/15/08	10/21/08	1/14/09	4/14/09	7/15/09	10/14/09	4/12/10	4/21/11	4/17/12	4/24/13	4/30/14	4/2/15	4/29/16	4/17/17	4/28/17	4/4/18	5/24/06	10/5/06	1/17/07	4/16/07	7/19/07	10/10/07	1/9/08	4/18/08	7/14/08	10/22/08	1/12/09	4/13/09
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																						NT													
Volatile Organic Compounds (VOCs)																																					
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	4.0 J	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+	9.0	4.8	< 10	< 10	< 10	< 10		<10	<10	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0
Benzene			< 0.50	0.60	< 0.50	< 0.50	NT	0.43 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		<0.50	<0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	0.31 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		<10	<10	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			2.7	10.3	6.1	4.7	6.9	5.6	2.3	< 2.0	3.9	5.9	< 2.0	< 2.0	2.8	4.2	< 2.0	< 2.0	2.6	1.9 J	< 2.0	< 2.0	< 2.0		<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			33.0	98.9	57.1	46.8	68.3	86.6	38.7	33.0	71.5	74.3	33.2	37.9	47.1	73.9	19.6	24.3	< 1.0	28.4	27.1	9.7	38.1		21.1	25.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			3.3	9.4	2.9	10	2.6	4.5	1.7	1.8	5.1	2.4	2.6	2.1	2.2	3.6	1.9	6.1	1.1	1.9	0.95 J	0.40 J	1.40		0.64 J	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			198	435	244	250	194	279	148	145	203	192 F-	189	236 F-	212	334	112	154	67.3	93.6	95.2	49.8	77.3		83.9	67.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			2.2	9.3	6.2	3.6	2.5	4.1	3.5	2.0	3.2	2.7	2.4	3.0	2.6	2.6	1.1	6.4	< 1.0	3.1	2.3	0.64 J	1.1		1.5	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25 R	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25 F- K-	< 50	< 25 K-	< 25	< 25		<130	<130	< 25	< 25 R	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			< 1.0	10.0 J+	1.0	0.93 J J+	NT	7.2	1.1	0.72 J	3.9	2.4	0.63 J	< 1.0	0.98 J	1.8	< 1.0	< 1.0	0.90 J	< 1.0	< 1.0	< 1.0	0.61 J		<1.0	<1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			60.4	160	29.3	39.6	31.2	49.3	12.1	22.4	16.8	22.8	22.6	19.3	22.0	16.9	14	14.8	11.9	9.7	10.1	10.7	6.5		15.1	10.7	7.8	0.69 J	0.67 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran			< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 G	< 10	< 10		<10	<10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			21.0	138 J+	23.2	5.6 J+	28.0	89.8	12.5	10.8	42.9	26.1	13.3	11.8 F+	19.2	24.3 J+	4.4	5.1	11.4	4.3	5.1	2.8	8.6		4.1	3.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			63.4	110	49.1	51.4	40.4	< 1.0	27.0	34.9	37.1	38.2	44.8	53.7 F+	44.4	43.7	24.3	26.4	13.9	14.1	16.3	15.6	12.4		21.3	15	< 1.0	3.4	3.2	1.5	1.5	1.6	2.2	1.7	1.7	1.8	1.7	2.3
Vinyl chloride			23.7	36.4	47.4	40.4	38.2	68.0	26.4	29.9	41.8 F+	42.6	50.1	66.5	57.0	107.0	34.9	53.9	39.3	28.9	51.7	11.8	16.1		9.6	16.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT									NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																	NT	NT	NT	NT	NT	NT	NT	NT		NT											
Iron																	2900 J+	11800	10700	15300	8970	NT	NT	NT		NT											
Manganese																	1510	3000	2590	2860	1570	154	2440	1150		1950											
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																					9890																
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT									NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l															159	184	724	252	185	<10	20.2	29.9		54.8											
Ethane	8015	µg/l															1.77	2.0	5.4	3.6	3.2 J	<10	< 10	<10		2											
Ethylene	8015	µg/l															0.87	1.1	11.6	4.92	3.8 J	<10	2.3 J	<10		1.6											
Alkalinity	E310.1	µg/l															338000	373000	464000	413000	393000	298000	319000	429000		336000											
Chloride	E325.3	µg/l															32500	189000	100000	247000	82500	74500	125000	33700		145000											
Chlorine, Total Residual	E330.4	µg/l															< 50 A	< 50	< 50 R	< 50 A F-	< 50 A	< 50 A				1700											
Iron, Ferrous	3500FE B	µg/l															NT	NT	NT	NT	4800	<100	4600	1200		2400											
Nitrate & Nitrite as N	E353.2	µg/l															120	320	200	280	150	390	< 110	<110		2600											
Nitrogen, Nitrate	E353.2	µg/l															120	320	200	280	150	390	< 100	<100		2600											
Nitrogen, Nitrite	E354.1	µg/l															< 10	< 10	< 10	< 10	< 10	<10	< 10	<10		<10											
Sodium	6010C	µg/l															NT	NT	NT	NT	46400	NT	NT	NT		NT											
Sulfate	E375.4	µg/l															41700	45300	29300	52400	104000	62800	232000	113000		139000											
Sulfide	E376.1	µg/l															< 2000	< 2000	< 2000	< 2000	< 2000	< 2000				<2000											
Surfactants	E425.1	µg/l															< 100	120	190	< 100	< 100	<100	110	<100		130											
Total Organic Carbon	E415.1	µg/l															5900	7400	9800	8500	7500	7000	8600	6600		8200											

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW105						MW106						MW107						MW108							MW109			MW110			MW111			MW111		
Sample Name:			MW105	MW105	MW105	MW105	MW105	MW105	MW106	MW106	MW106	MW106	MW106	MW106	MW107	MW107	MW107	MW107	MW107	MW107	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW109	MW109	MW109	MW110	MW110	MW110	MW111	MW111	MW111	MW111	MW111	MW111
Well Screen Interval (ft bgs):			19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	19 to 29	9 to 19	9 to 19	9 to 19	9 to 19	9 to 19	9 to 19	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	2 to 12	3 to 13	3 to 13	3 to 13	3 to 13	3 to 13	3 to 13	4 to 14	4 to 14	4 to 14	4 to 14	4 to 14	4 to 14
Sample Date:			7/14/09	10/14/09	4/12/10	4/20/11	4/17/12	4/23/13	1/18/07	4/13/07	7/19/07	10/10/07	1/10/08	4/17/08	1/18/07	4/13/07	7/18/07	10/10/07	1/10/08	4/17/08	1/18/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08	9/15/23	1/18/07	4/16/07	4/17/08	1/18/07	4/17/07	5/23/07	1/18/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																					
Volatile Organic Compounds (VOCs)																																							
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	69.9	< 5.0	9.2	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 5.0	< 13	NT	< 25	< 0.50	< 1.0
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	7.7	< 5.0	1.1 J	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	< 1.0	< 50	< 1.0	< 2.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.28 J	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	< 2.0	< 100	< 2.0	< 4.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	1.2	NT	0.56 J	0.39 J	1.7	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	1.2	< 2.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.5	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	NT	< 100	< 2.0	< 4.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.6	4.3	0.52 J	< 1.0	2.1	3.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	30.9	15.7 J	16.8	19.1 J	5.6	4.3 C+
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	0.43 J	< 50	< 1.0	< 2.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.4	6.3	3.4	3.9	4.1	1.5	3.2	3.7	< 1.0	< 1.0	1.3 G	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	17.6	< 25	10.5	< 50	4.1	3.7 C+
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	22.6	17.2 J	56.3	63.9	10.6	4.4 C+
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	1.5	< 50	< 1.0	< 2.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	NT	< 100	< 2.0	< 4.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25 K-	< 50	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 250	< 25	< 25	< 25	< 25	< 25	< 25	NT	< 250	< 630	NT	< 1300	< 25	< 50
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Methyl tert-butyl ether			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	12.2	12.1	NT	252	78.0	4.9	< 1.0	< 1.0	NT	< 1.0	0.21 J	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 2.0	3.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	0.45 J	< 2.0
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	31.4 J	NT	< 100	< 2.0	< 4.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	2.2	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 20	< 50	NT	< 100	< 2.0	< 4.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 50	< 130	NT	< 250	< 5.0	< 10
Tetrachloroethylene (PCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.53 J	1.0 F-	1.2	2.3	1.7	2.3	0.44 J	< 1.0 F-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 F-	< 1.0	< 1.0	0.60 J	< 1.0	< 1.0	< 1.0	178 F-	28.5	17.4	0.89 J F-	0.93 J	NT	13700 F-	7370	6340	8350	3100	1160 C+
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 2.0	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 100	< 250	NT	< 500	< 10	< 20
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	110	0.40 J	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	15.3	1.5 J+	6.4	11.3	14.9	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.77 J	0.97 J	0.31 J	< 1.0	< 1.0	< 1.0	142	56.5	89.1	84.1	41.3	17.6 C+
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	< 1.0	< 50	< 1.0	< 2.0
Trichloroethylene (TCE)			1.6	0.78 J	1.1	1.8	1.7	1.6	3.7	4.8	3.6	4.4	4.9	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.5	< 1.0	0.52 J	< 1.0	< 1.0	< 1.0	150	84.4	120	125	42.1	19.9 C+
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	< 1.0	< 50	< 1.0	< 2.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 10	< 25	NT	< 50	< 1.0	< 2.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic									< 10						< 10						< 10												2.9							
Iron									319						6160						< 100												84000							
Manganese									NT						NT						NT												NT							
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																							
Others			NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT		NT		NT	NT	NT	NT	NT	NT
Methane	8015	µg/l							< 10						4.13 J						0.18 J											< 10		NT					
Ethane	8015	µg/l							< 10						< 10						< 10											< 10		NT					
Ethylene	8015	µg/l							< 10						< 10						< 10											< 10		NT					
Alkalinity	E310.1	µg/l							83100						174000						71100											122000		NT					
Chloride	E325.3	µg/l							1870000						100000						235000											142000		1010000					
Chlorine, Total Residual	E330.4	µg/l							NT						NT						NT											NT		< 50					
Iron, Ferrous	3500FE B	µg/l							NT						NT						NT											NT		NT					
Nitrate & Nitrite as N	E353.2	µg/l							12900						100						< 100											2400		NT					
Nitrogen, Nitrate	E353.2	µg/l							12800						< 110						< 110											2300		NT					
Nitrogen, Nitrite	E354.1	µg/l							83						< 10						< 10											54		NT					
Sodium	6010C	µg/l							NT						NT						NT											NT		NT					
Sulfate	E375.4	µg/l							86800						33400						28100											47700		NT					
Sulfide	E376.1	µg/l							< 2000						< 2000						< 2000											< 2000		NT					
Surfactants	E425.1	µg/l							< 100						150						< 100											< 100		NT					
Total Organic Carbon	E415.1	µg/l							1300						12200						1300											5700		NT					

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW112A														MW112A															
Sample Name:			MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW900 (FD)	MW112A	MW901 (FD)	MW112A	MW900 (FD)	MW112A	MW901 (FD)	MW112A	MW901 (FD)	MW112A	MW900 (FD)	MW112A	MW900 (FD)	MW112A	MW112A	MW900 (FD)	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW900 (FD)
Well Screen Interval (ft bgs):			4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19
Sample Date:			3/23/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08	7/14/08	7/14/08	10/22/08	10/22/08	1/12/09	1/12/09	4/13/09	4/13/09	7/14/09	7/14/09	10/14/09	10/14/09	4/12/10	4/12/10	10/27/10	4/20/11	4/20/11	11/16/11	4/16/12	4/16/12	11/12/12	4/24/13	4/24/13	11/18/13	6/11/14
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																														
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0 F+	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 10	< 10	< 5.0	< 5.0 K-	< 5.0 K-	< 10 K-	< 20	< 20	< 10 K-	< 10 K-
Benzene			< 0.50	< 0.50	NT	< 0.50	0.34 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.26 J	0.27 J	0.36 J	0.28 J	< 0.50 F-	< 0.50 F-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10 K-	< 10	< 10	< 5.0	< 5.0
Carbon disulfide			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
Chloroform			0.35 J	< 1.0	NT	< 1.0	0.32 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.23 J	0.24 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
1,1-Dichloroethane			27.6	24.0	6.4	35.6	114	40.9 C+	31.5	31.2	43.7	44.6	70.9	70.7	109	89.6	99.3	107	137	142	83.8	88.3	85.5	38.1	38.8	39.5	71.5	69.0	48.1	24.2	37.0	73.5	18.3	64.1 G K-
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
1,1-Dichloroethylene			19.7	10.8	6.7	19.7	82.4	36.6 C+	24.5	24.5	39.1	39.3	61.7	61.7	89.2	73.0	91.4	97.7	123	130	74.9	78.6	89.1	57.9	53.0	47.6	86.4	76.2	57.3	30.2	30.0	86.5	38.5	109 K+
cis-1,2-Dichloroethylene			< 1.0	0.54 J	0.98 J	4.2	18.7	55.3 C+	81.5	80.9	214	212	225	224	296	247	311	380	390	373	165	196	214	143	140	169	178	185	150	145	112	209	150	321
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.9 G	2.5 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.9	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	2.9	< 1.0	< 1.0	< 1.0 K+
1,2-Dichloropropane			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 50	< 25	< 25	< 25	< 50	< 50	< 50	< 25	< 25
Ethylbenzene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0 K-	< 5.0 K-
4-Isopropyltoluene			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Methyl tert-butyl ether			10.8	13.8	NT	20.3	87.0	20.5 C+	14.9	13.5	32.4	32.2	33.3	32.9	29.9	23.3	41.4	46.0	77.5	81.4	15.9	20.3	50.3	9.2	9.1	22.3	27.1	26.2	28.8	19.0	14.1	64.6	4.6	47.3 K+
Methylene chloride			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
Naphthalene			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Tetrachloroethylene (PCE)			261	198	144	159	359	202 C+	165	164	226	228	287	290	290 G	384	359	360	393	405	481	477	561	415	409	363	569 R	604	546	339	581	371	266
Tetrahydrofuran			< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F+	< 10 F+	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 10	< 10	< 10	< 20 F- K-	< 20	< 20	< 10	< 10
Toluene			0.54 J	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			1.3	0.96 J	0.68 J	1.4	5.8	1.9 C+	1.3	1.2	5.6	5.7	3.3	3.2	3.9	3.1	3.8	4.0	4.2 J+	4.4 J+	3.4	3.4	4.3	7.5	< 2.0	3.3	5.3	4.8	4.1	4.3	6.5	8.0	1.5	3.6
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Trichloroethylene (TCE)			34.0	36.1	26.7	61.3	142	72.8 C+	46.1	44.3	54.9	55.9	88.2	87.9	140	114	137	139	194	198.0	173	179	181	110	108	95.0	171	157	138	87.0	140	146	82.0	117
Vinyl chloride			0.84 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.42 J	0.43 J	< 1.0	< 1.0	1.2	1.3	1.0	1.5	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	4.4	0.90 J	< 1.0
m,p-Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																					NT											
Iron																					< 0.10 J+			NT				< 100				
Manganese																					875			1570				954				
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																			0.18 J B			< 0.30			0.66			0.10 J		
Ethane	8015	µg/l																			< 0.10			< 0.10			< 0.10			< 0.10		
Ethylene	8015	µg/l																			< 0.10			< 0.10			< 0.10			< 0.10		
Alkalinity	E310.1	µg/l																			233000			252000			245000			278000		
Chloride	E325.3	µg/l																			810000			915000			655000			857000		
Chlorine, Total Residual	E330.4	µg/l																			< 50 A			< 50			< 50 A			< 50 A F- J		
Iron, Ferrous	3500FE B	µg/l																			NT			NT			NT			NT		
Nitrate & Nitrite as N	E353.2	µg/l																			4700			3500			2600			1300		
Nitrogen, Nitrate	E353.2	µg/l																			4700			3500			2600			1300		
Nitrogen, Nitrite	E354.1	µg/l																			11			< 10			< 10			< 10		
Sodium	6010C	µg/l																			NT			NT			NT			NT		
Sulfate	E375.4	µg/l																			57100			52200			66100			68000		
Sulfide	E376.1	µg/l																			< 2000			< 2000			< 2000			< 2000		
Surfactants	E425.1	µg/l																			< 100			< 100			< 100			< 100		
Total Organic Carbon	E415.1	µg/l																			1200			1100			< 1000			1500		

Sample Location:			MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A
Sample Name:			MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A
Well Screen Interval (ft bgs):			4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19
Sample Date:			11/18/14	6/11/15	11/18/15	6/9/16	11/16/16	6/8/17	11/15/17	6/6/18	11/14/18	6/5/19	11/13/19	6/3/20	11/12/20	6/2/21	11/11/21	6/1/22	11/10/22	6/1/23	11/9/23	6/6/06	9/6/06	12/6/06	3/23/07	4/16/07	7/18/07	10/10/07	1/10/08	4/17/08	7/14/08	10/22/08	1/12/09
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	SHA	SHA	SHA	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																														
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			64.1 G K-	23.2	25.2	27.6	24.0	6.4	35.6	114	40.9 C+	31.5	31.2	43.7	44.6	70.9	70.7	109	89.6	99.3	107	137	142	83.8	88.3	85.5	38.1	38.8	39.5	71.5	69.0	48.1	24.2
1,2-Dichloroethane			< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			109 K+	39	42.9	19.7	10.8	6.7	19.7	82.4	36.6 C+	24.5	24.5	39.1	39.3	61.7	61.7	89.2	73.0	91.4	97.7	123	130	74.9	78.6	89.1	57.9	53.0	47.6	86.4	76.2	57.3	30.2
cis-1,2-Dichloroethylene			321	71.1	84.1	< 1.0	0.54 J	0.98 J	4.2	18.7	55.3 C+	81.5	80.9	214	212	225	224	296	247	311	380	390	373	165	196	214	143	140	169	178	185	150	145
trans-1,2-Dichloroethylene			< 1.0 K+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.9 G	2.5 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.9	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	2.9
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 50	< 50	< 25	< 25	< 25
Ethylbenzene			< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

			Sample Location:	MW112A	MW112A	MW112A	MW901 (FD)	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A
			Sample Name:	MW112A	MW112A	MW112A	MW901 (FD)	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A
			Well Screen Interval (ft bgs):	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19
			Sample Date:	4/28/16	11/21/16	4/18/17	4/18/2017	11/10/2017	4/4/2018	11/15/2018	4/15/2019	11/22/2019	4/16/2020	11/18/2020	4/13/2021	11/30/2021	4/14/2022	11/29/2022	5/11/2023	11/7/2023
			Collected By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																		
Volatile Organic Compounds (VOCs)																				
Acetone	8260	µg/l		< 10	< 10	<10	<10	< 20	<25	<25	<25	<10	<25	<25	<25	<25	<25	<25	<10	< 25
Benzene				< 0.50	0.43 J	0.23 J	0.23 J	< 1.0	<1.3	<1.3	<1.3	<0.50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<1	< 2.5
Bromodichloromethane				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
2-Butanone (MEK)				< 5.0	< 10	<10	<10	< 20	<25	<25	<25	<10	<25	<25	<25	<25	<25	<25	<5	< 25
Carbon disulfide				< 5.0	< 5.0	<2.0	<2.0	< 4.0	<5.0	<5.0	<5.0	<2.0	<10	<10	<10	<10	<10	<10	<2	< 10
Carbon tetrachloride				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<1	< 5.0
Chlorobenzene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
Chloroethane				< 2.0	< 2.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<10	<10	<10	<10	<10	<10	<4	< 10
Chloroform				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
Chloromethane				< 2.0	< 2.0	<2.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<10	<10	<10	<10	<10	<10	<4	< 10
1,4-Dichlorobenzene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
1,1-Dichloroethane				14.1	77	34.1	30.1	88.1	25.3	25.3	38.5	36.9	51	48	40	35	24	35	50	39
1,2-Dichloroethane				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
1,1-Dichloroethylene				21.5	132	47.7	43.0	92.5	33.0	33.0	57.3	63.1	79	98	58	63	45	67	27	53
cis-1,2-Dichloroethylene				108	230	78.2	71.8	155	98.5	98.5	60.6	131.0	72	130	62	120	85	68	100	64
trans-1,2-Dichloroethylene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
1,2-Dichloropropane				< 2.0	< 2.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
1,4-Dioxane				< 25	< 50	<130	<130	< 250	<310	<310	<310	<130	<1200	<1200	<1200	<1200	<1200	<1200	<500	< 1200
Ethylbenzene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
2-Hexanone				< 5.0	< 10	<5.0	<5.0	< 10	<13	<13	<13	<5.0	<25	<25	<25	<25	<25	<25	<10	< 25
4-Isopropyltoluene				< 5.0	< 5.0	<2.0	<2.0	< 4.0	<5.0	<5.0	<5.0	<2.0	<10	<10	<10	<10	<10	<10	<4	< 10
Methyl tert-butyl ether				3.9	53.9	11.6	11.4	56	19.1	19.1	25.9	21.7	27	30	19	12	5	13	10	15
Methylene chloride				< 2.0	< 2.0	<2.0	<2.0	< 4.0	<5.0	<5.0	<5.0	<2.0	<10	<10	<10	<10	<10	<10	<4	< 10
Naphthalene				< 5.0	< 5.0	<5.0	<5.0	< 10	<13	<13	<13	<5.0	<10	<10	<10	<10	<10	<10	<4	< 10
Tert-amyl methyl ether				< 2.0	< 2.0	<2.0	<2.0	< 4.0	<5.0	<5.0	<5.0	<2.0	<10	<10	<10	<10	<10	<10	<4	< 10
1,1,1,2-Tetrachloroethane				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
Tetrachloroethylene (PCE)				258	508	435	404	908	317	317	555	463	750	760	630	460	370	560	300	460
Tetrahydrofuran				< 10	< 10	<10	<10	< 20	<25	<25	<25	<10	<10	<10	<10	<10	<10	<10	<4	< 10
Toluene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
1,1,1-Trichloroethane (TCA)				1.7	6.5	4.1	3.6	11.4	3.6	3.6	5.4	5.0	7.5	7.8	7.0	5.1	3.0	<5	4.1	5.4
1,1,2-Trichloroethane				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
Trichloroethylene (TCE)				61.3	220.0	118.0	107	247	92.3	92.3	136	136	180	190	140	130	95	140	170	110
Vinyl chloride				< 1.0	1.3	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	1.4	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	11
m,p-Xylene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<10	<10	<10	<10	<10	<10	<4	< 10
o-Xylene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
Total Xylene				< 1.0	< 1.0	<1.0	<1.0	< 2.0	<2.5	<2.5	<2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<2	< 5.0
Metals (Total)	6010B	µg/l			NT		NT	NT		NT		NT		NT		NT		NT	NT	NT
Arsenic				NT		NT			NT		NT		NT		NT		NT			
Iron				NT		NT			NT		NT		NT		NT		NT			
Manganese				1530		627			2620		3360		2600		2550		635			
Metals (Dissolved)	6010C	µg/l		NT	NT	NT	NT	NT	NT	NT		NT		NT	NT	NT	NT	NT	NT	NT
Iron											NT		NT							
Others					NT		NT	NT		NT		NT		NT		NT		NT	NT	NT
Methane	8015	µg/l		< 10		<10			320		6.7		17.6		5.88		2.11		3.94	
Ethane	8015	µg/l		< 10		<10			12.2		<0.23		<0.500		<0.500		<0.500		<0.500	
Ethylene	8015	µg/l		< 10		<10			<0.31		<0.31		<0.500		<0.500		<0.500		<0.500	
Alkalinity	E310.1	µg/l		332000		339000			247000		259000		248000		234000		265000		249000	
Chloride	E325.3	µg/l		700000		439000			170000		517000		440000		540000		410000		560000	
Chlorine, Total Residual	E330.4	µg/l							280		<100		<20		<20		<20		<20	
Iron, Ferrous	3500FE B	µg/l		< 100		<100			<200		<200		<500		<500		<500		<500	
Nitrate & Nitrite as N	E353.2	µg/l		490		620			<100		490		330		240		<380		<100	
Nitrogen, Nitrate	E353.2	µg/l		490		620			<110		480		334		217		<371		<100	
Nitrogen, Nitrite	E354.1	µg/l		< 10		<10			<10		<10		<300		<300		<300		423	
Sodium	6010C	µg/l		NT		NT			NT		NT		NT		NT		NT		NT	
Sulfate	E375.4	µg/l		117000		71000			59200		551000		50000		50000		60000		44000	
Sulfide	E376.1	µg/l							<200		<200		<100		<100		<100		<50	
Surfactants	E425.1	µg/l		< 100		<100			<100		<100		<50		<50		<50		70	
Total Organic Carbon	E415.1	µg/l		< 1000		<1000			1700		<1000		750		700		750		2600	

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

			Sample Location:	MW116																											
			Sample Name:	MW116	MW116	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW900 (FD)	MW116	MW900 (FD)
			Well Screen Interval (ft bgs):	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	4.5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15
			Sample Date:	3/23/07	4/16/07	7/18/07	7/18/07	10/12/07	10/12/07	1/11/08	1/11/08	4/15/08	4/15/08	7/16/08	10/21/08	1/14/09	4/15/09	7/14/09	10/14/09	4/13/10	4/13/10	4/13/10	4/21/11	4/21/11	4/17/12	4/17/12	4/24/13	4/24/13	5/1/14	5/1/14	4/2/15	4/2/15	4/2/15
			Collected By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l		< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10 F+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 20	< 10	< 20	< 20	< 20	< 20
Benzene				0.24 J	< 0.50	NT	NT	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane				< 1.0	< 1.0	NT	NT	1.1 J	0.99 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
2-Butanone (MEK)				< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10
Carbon disulfide				< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	2.9 J	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10
Carbon tetrachloride				< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chlorobenzene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroethane				< 2.0	< 2.0	2.4	2.3	2.4 J	2.4 J	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chloroform				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloromethane				< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
1,4-Dichlorobenzene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0 J+	< 2.0 J+	< 2.0	< 5.0	< 1.0	1.6	1.0	0.82 J	0.77 J	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1-Dichloroethane				135	4.4	97.3	96.9	80.1	79.3	18.9	15.6	66.8	64.5	114	109	72.5	101	69.7	92.2	63.9	68.9	27.8	23.4	52.8	51.8	31.5	25.8	38.5	41.9	52.0	49.9		
1,2-Dichloroethane				< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	0.23 J	0.20 J	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1-Dichloroethylene				107	2.7	33.8	34.0	24.8	22.4	14.7	11.8	46.3	45.7	78.4	79.8	56.5	70.6	35.2	68.8	49.1	51.9	22.4	14.1	43.3	42.3	26.7	39.4	46.1	50.3	52.4	50.8	
cis-1,2-Dichloroethylene				103	21.7	415	431	346	341	49.5	42.9	105	102	286	319	146	84.1	92.7	133	80.7	92.1	84.6	68.3	115	112	94.8	144	107	116	114	111	
trans-1,2-Dichloroethylene				1.8	< 1.0	4.3	4.4	2.5	2.4	0.88 J	1.3	< 1.0	< 1.0	< 2.0	1.3	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	1.6	1.6	1.8	< 1.0	< 1.0	< 2.0	1.1	< 2.0	< 2.0	1.1 J	<2.0		
1,2-Dichloropropane				< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
1,4-Dioxane				< 25	< 25	NT	NT	< 50	< 50	< 25	< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50 F-	< 50	< 130	< 25	< 25	< 25	< 25 K-	< 25 K-	< 100	< 50	< 50	< 50	< 50	< 50	
Ethylbenzene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
2-Hexanone				< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	
4-Isopropyltoluene				< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0 J+	< 10 J+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	
Methyl tert-butyl ether				12.3	0.40 J	NT	NT	12.5	12.7	2.1 J+	1.3 J+	7.1	6.9	18.2	18.0	9.0	11.7	7.2	8.4	5.4	5.9	4.4	4.4	3.4	3.3	14.1	10.6 K-	4.4	4.8	5.0	4.9	
Methylene chloride				< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 4.0	
Naphthalene				< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	0.68 J	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0 J+	< 10 J+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 10	
Tert-amyl methyl ether				< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0 K-	< 4.0	< 4.0	< 4.0	< 4.0	
1,1,1,2-Tetrachloroethane				< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	
Tetrachloroethylene (PCE)				1180	32.2	167	168	116	110	267	257 J+	603	607	864	839	795	796 G	1020	1010	860	933	323	166	774	778	527	396	618	670	726	695	
Tetrahydrofuran				30.6	13.8	NT	NT	< 20	< 20	< 10	< 10	< 10	< 10	< 20	< 10	< 20	< 10	< 20 F+	< 20	< 50	< 10	< 10	< 10	< 10	< 10	< 20	< 10	13.3 J	15.7 J	<20	<20	
Toluene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	
1,1,1-Trichloroethane (TCA)				21.6	0.67 J	10.6	10.7	9.4	9.2	3.3	2.5	10.7	10.7	16.0	15.6	12.8	16.6	8.5	14.3 J+	8.2	10.2	4.2	3.8	8.0	8.3	6.0	3.0	6.7	7.3	8.0	7.6	
1,1,2-Trichloroethane				< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	
Trichloroethylene (TCE)				358	19.4	72.7	73.2	136	129	66.3	53.6	175	174	257	269	229	341	196	267	195	212	88.7	57.7	181	182	126	95.4	164	182	188	183	
Vinyl chloride				14.1	3.2	185	182	84.9	76.4	3.1	2.3	2.6	2.7	7.2	21.3	13.9	6.3	6.1	6.9	5.7	6.1	13.5	9.0	8.8 K+	8.8 K+	3.8	< 1.0	1.8 J	2.2	3.8	3.8	
m,p-Xylene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	1.2	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	
o-Xylene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	
Total Xylene				< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	1.2	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	
Metals (Total)	6010B	µg/l		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Chlorine, Total Residual	E330.4	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Sulfide	E376.1	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW116																MW117D																					
Sample Name:			MW116	MW900 (FD)	MW116	MW900 (FD)	MW116	MW900 (FD)	MW116	MW900 (FD)	MW116	MW900 (FD	MW116	MW900	MW116	MW900	MW116	MW900	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D	MW117D
Well Screen Interval (ft bgs):			5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70	60 to 70
Sample Date:			4/29/16	4/29/16	4/17/17	4/17/17	4/4/18	4/4/18	4/16/19	4/16/19	4/17/20	4/17/20	4/14/21	4/14/21	4/14/22	4/14/22	4/18/23	4/18/23	7/19/07	10/11/07	1/15/08	4/16/08	7/16/08	10/21/08	1/13/09	4/14/09	7/15/09	10/14/09	4/13/10	4/20/11	4/16/12	4/24/13	5/1/14	4/2/15	4/28/16	4/17/17	4/3/18	4/15/19
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																					
Volatile Organic Compounds (VOCs)																																							
Acetone	8260	µg/l	< 20	< 10	<10	<10	<10	<10	<10	<10	<25	<25	<12	<12	<5.0	<5.0	<5.0	<5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	<10	<10	<10	<10
Benzene			< 1.0	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<1.2	<1.2	<0.50	<0.50	<0.50	<0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.5
Bromodichloromethane			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			< 10	< 5.0	<10	<10	<10	<10	<10	<10	<25	<25	<25	<25	<5.0	<5.0	<5.0	<5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<10
Carbon disulfide			< 10	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 5.0	< 5.0	6.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			< 4.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<1.0	<1.0
Chloroform			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	0.43 J	<1.0	<1.0	<1.0
Chloromethane			< 4.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<1.0	<1.0
1,4-Dichlorobenzene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			38.3	45.0	49.4	49.8	44.1	46.2	22.7	53.9	70	75	39	40	30	29	28	27	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			27.7	36.4	35.1	34.4	19.7	20.9	9.4	31.3	30	39	27	27	20	20	23	23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene			50.6	59	67.5	67.2	42.6	44.2	27.3	112.0	120	130	110	110	140	130	150	150	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			< 2.0	< 1.0	0.42 J	0.45 J	1.1	1.2	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			< 4.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			< 50	< 50	<130	<130	<130	<130	<130	<130	<1200	<1200	<620	<620	<250	<250	<250	<250	NT	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	<130	<130	<130	<130
Ethylbenzene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			< 10	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	<25	<12	<12	<5.0	<5.0	<5.0	<5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			< 10	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			< 2.0	0.79 J	1.6	1.6	1.1	1.2	<1.0	3.5	<10	<10	<5.0	<5.0	2.3	2.2	2.3	2.2	NT	1.6	2.3	1.5	< 1.0	1.5	0.96 J	0.86 J	1.3	1.5	1.2	< 1.0	< 1.0	6.8	< 1.0	< 1.0	0.66 J	1.3	<1.0	1.4	
Methylene chloride			< 4.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	
Naphthalene			< 10	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 5.0	4.9 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	
Tert-amyl methyl ether			< 4.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	
1,1,1,2-Tetrachloroethane			< 2.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			450	436	482	456	233	253	129	404	520	550	340	340	120	120	130	130	0.54 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Tetrahydrofuran			<20	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0	NT	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<10
Toluene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	0.98 J	< 1.0	0.34 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			3.8	4.4	3.8	3.7	1.8	2.0	1.0	2.6	<5.0	<5.0	2.6	2.6	3.2	3.2	2.8	2.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			113	139	131	129	83.3	86.3	37	157	200	220	120	120	35	34	53	54	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			< 2.0	< 1.0	1.6	1.4	<1.0	<1.0	<1.0	20.2	22	29	50	49	130	120	87	86	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
o-Xylene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																							
Iron																																							
Manganese																																							
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																							
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																																					
Ethane	8015	µg/l																																					
Ethylene	8015	µg/l																																					
Alkalinity	E310.1	µg/l																																					
Chloride	E325.3	µg/l																																					
Chlorine, Total Residual	E330.4	µg/l																																					
Iron, Ferrous	3500FE B	µg/l																																					
Nitrate & Nitrite as N	E353.2	µg/l																																					
Nitrogen, Nitrate	E353.2	µg/l																																					
Nitrogen, Nitrite	E354.1	µg/l																																					
Sodium	6010C	µg/l																																					
Sulfate	E375.4	µg/l																																					
Sulfide	E376.1	µg/l																																					
Surfactants	E425.1	µg/l																																					
Total Organic Carbon	E415.1	µg/l																																					

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW117D				MW117S																								
Sample Name:			MW117D 60 to 70 4/16/20 GEI	MW117D 60 to 70 4/13/21 GEI	MW117D 60 to 70 4/12/22 GEI	MW117D 60 to 70 4/17/23 GEI	MW117S 5 to 20 7/18/07 GEI	MW117S 5 to 20 10/15/07 GEI	MW117S 5 to 20 1/11/08 GEI	MW117S 5 to 20 4/16/08 GEI	MW117S 5 to 20 7/16/08 GEI	MW117S 5 to 20 10/21/08 GEI	MW117S 5 to 20 1/13/09 GEI	MW117S 5 to 20 4/14/09 GEI	MW117S 5 to 20 7/15/09 GEI	MW117S 5 to 20 10/14/09 GEI	MW117S 5 to 20 4/13/10 GEI	MW117S 5 to 20 4/21/11 GEI	MW117S 5 to 20 4/16/12 GEI	MW117S 5 to 20 4/24/13 GEI	MW117S 5 to 20 5/1/14 GEI	MW117S 5 to 20 4/2/15 GEI	MW117S 5 to 20 4/27/16 GEI	MW117S 5 to 20 4/17/17 GEI	MW117S 5 to 20 4/3/18 GEI	MW117S 5 to 20 4/15/19 GEI	MW117S 5 to 20 4/16/20 GEI	MW117S 5 to 20 4/13/21 GEI	MW117S 5 to 20 4/12/22 GEI	MW117S 5 to 20 4/17/23 GEI
Well Screen Interval (ft bgs):																															
Sample Date:																															
Collected By:																															
Analyte	**Method**	**Units**																													
Volatile Organic Compounds (VOCs)																															
Acetone	8260	µg/l	<5.0	<5.0	5.8	<5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	<10	<10	<0.10	<5.0	<5.0	<5.0	<5.0
Benzene			<0.5	<0.5	<0.5	<0.5	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			<5.0	<5.0	<5.0	<5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Carbon disulfide			<2.0	<2.0	<2.0	<2.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Chloroform			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane			<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			<1.0	<1.0	<1.0	<1.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			<250	<250	<250	<250	NT	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250
Ethylbenzene			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			<5.0	<5.0	<5.0	<5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			<2.0	<2.0	<2.0	<2.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			2	2	<2.0	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Methylene chloride			<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene			<2.0	<2.0	<2.0	<2.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
Tert-amyl methyl ether			<2.0	<2.0	<2.0	<2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0	<1.0	<1.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrahydrofuran			<2.0	<2.0	<2.0	<2.0	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0
Toluene			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			<2.0	<2.0	<2.0	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			<1.0	<1.0	<1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																															
Iron																															
Manganese																															
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																															
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																													
Ethane	8015	µg/l																													
Ethylene	8015	µg/l																													
Alkalinity	E310.1	µg/l																													
Chloride	E325.3	µg/l																													
Chlorine, Total Residual	E330.4	µg/l																													
Iron, Ferrous	3500FE B	µg/l																													
Nitrate & Nitrite as N	E353.2	µg/l																													
Nitrogen, Nitrate	E353.2	µg/l																													
Nitrogen, Nitrite	E354.1	µg/l																													
Sodium	6010C	µg/l																													
Sulfate	E375.4	µg/l																													
Sulfide	E376.1	µg/l																													
Surfactants	E425.1	µg/l																													
Total Organic Carbon	E415.1	µg/l																													

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

			Sample Location:	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T
			Sample Name:	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T	MW117T
			Well Screen Interval (ft bgs):	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45	35 to 45
			Sample Date:	7/19/07	10/11/07	1/15/08	4/16/08	7/16/08	10/21/08	1/13/09	4/14/09	7/15/09	10/16/09	4/13/10	4/21/11	4/16/12	4/23/13	5/1/14	4/2/15	4/27/16	4/17/17	4/3/18	4/15/19	4/16/20	4/13/21	4/12/22	4/17/23				
			Collected By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI				
Analyte	**Method**	**Units**																												
Volatile Organic Compounds (VOCs)																														
Acetone	8260	µg/l	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 10	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0			
Benzene			NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5			
Bromodichloromethane			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
2-Butanone (MEK)			NT	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0			
Carbon disulfide			NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Chlorobenzene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0			
Chloroform			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Chloromethane			NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0			
1,4-Dichlorobenzene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,2-Dichloropropane			NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,4-Dioxane			NT	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250			
Ethylbenzene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
2-Hexanone			NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
4-Isopropyltoluene			NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Methyl tert-butyl ether			NT	3.4	9.8	4.8	1.7	2.8	1.9	4.1	1.5	7.0	1.6	1.4	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0			
Methylene chloride			NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
Naphthalene			NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0			
Tert-amyl methyl ether			NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0			
1,1,1,2-Tetrachloroethane			NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Tetrachloroethylene (PCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0			
Tetrahydrofuran			NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0			
Toluene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Trichloroethylene (TCE)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
m,p-Xylene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0			
o-Xylene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Total Xylene			NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
Arsenic																														
Iron																														
Manganese																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
Iron																														
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
Methane	8015	µg/l																												
Ethane	8015	µg/l																												
Ethylene	8015	µg/l																												
Alkalinity	E310.1	µg/l																												
Chloride	E325.3	µg/l																												
Chlorine, Total Residual	E330.4	µg/l																												
Iron, Ferrous	3500FE B	µg/l																												
Nitrate & Nitrite as N	E353.2	µg/l																												
Nitrogen, Nitrate	E353.2	µg/l																												
Nitrogen, Nitrite	E354.1	µg/l																												
Sodium	6010C	µg/l																												
Sulfate	E375.4	µg/l																												
Sulfide	E376.1	µg/l																												
Surfactants	E425.1	µg/l																												
Total Organic Carbon	E415.1	µg/l																												

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW118D																							
Sample Name:			MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW901 (FD	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D	MW118D
Well Screen Interval (ft bgs):			70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80	70 to 80
Sample Date:			7/20/07	8/30/07	10/11/07	1/16/08	4/16/08	7/16/08	10/21/08	1/14/09	4/14/09	7/15/09	10/14/09	10/14/09	4/12/10	4/20/11	4/16/12	11/12/12	4/24/13	11/18/13	5/1/14	11/18/14	4/2/15	11/19/15	4/28/16	11/21/16
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																								
Volatile Organic Compounds (VOCs)																										
Acetone	8260	µg/l	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0 K-	< 10	< 10 K-	< 10	< 10	< 10	< 10	< 10	< 10
Benzene			NT	NT	< 0.50	0.24 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10
Carbon disulfide			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.6 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	4.8	3.1	3.1
Chloroform			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			20.3	21.4	31.2	31.7	33.3	34.3	22.8	26.0	22.8	28.7	41.2	39.5	40.0	43.5	36.9	41.4	38.5	39.1	40.6	47.9	46.6	39.3	43.9	37.7
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.55 J	< 1.0	< 1.0	< 1.0	0.79 J K+	0.90 J	1.6	1.8	0.85 J
cis-1,2-Dichloroethylene			0.55 J	< 1.0	< 1.0	< 1.0	< 1.0	0.96 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	1.2	1.6	2.7	5.1	6.5	6.8	6.9	5.6	27.8	8.6
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.74 J	0.68 J	< 1.0 K+	0.62 J	2.2	2.9	0.81 J
1,2-Dichloropropane			NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			NT	NT	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 50	< 25	< 25	< 25	< 25	< 25	< 50
Ethylbenzene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10
4-Isopropyltoluene			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.93 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			NT	NT	< 1.0	0.40 J	< 1.0	0.40 J	< 1.0	< 1.0	0.38 J	0.39 J	0.55 J	0.51 J	< 1.0	0.83 J	< 1.0	0.63 J	< 1.0	0.46 J	< 1.0	1.9 K+	0.69 J	0.89 J	< 1.0	1.3
Methylene chloride			NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.1 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			7.0	8.4	8.2	6.1	5.7	7.1	2.1	1.2	< 1.0	2.3	0.93 J	1.1	1.5	4.6	8.4	4.3	5.8	1.3	< 1.0	2.2	5.1	39.7	49.8	6.5
Tetrahydrofuran			NT	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F- K-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			NT	NT	< 1.0	0.62 J	< 1.0	0.27 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			1.2	3.9	1.8	0.94 J	1.0	1.9	< 1.0	1.9	1.5	3.0	6.1	6.3	10.0	11.9	7.4	11.5	7.7	7.3	4.3	6.9	4.6	17.6	14.4	3.3
Vinyl chloride			< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 G K-	< 1.0	1.9	20.2	3.1
m,p-Xylene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																										
Iron																										
Manganese																										
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																										
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																								
Ethane	8015	µg/l																								
Ethylene	8015	µg/l																								
Alkalinity	E310.1	µg/l																								
Chloride	E325.3	µg/l																								
Chlorine, Total Residual	E330.4	µg/l																								
Iron, Ferrous	3500FE B	µg/l																								
Nitrate & Nitrite as N	E353.2	µg/l																								
Nitrogen, Nitrate	E353.2	µg/l																								
Nitrogen, Nitrite	E354.1	µg/l																								
Sodium	6010C	µg/l																								
Sulfate	E375.4	µg/l																								
Sulfide	E376.1	µg/l																								
Surfactants	E425.1	µg/l																								
Total Organic Carbon	E415.1	µg/l																								

General Notes:

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2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

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Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW118S		MW118T																								
Sample Name:			MW118S	MW118S	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T
Well Screen Interval (ft bgs):			3 to 14	3 to 14	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5
Sample Date:			4/12/22	4/17/23	7/20/07	8/30/07	10/11/07	1/15/08	4/16/08	7/15/08	10/21/08	1/14/09	4/14/09	7/14/09	10/15/09	4/12/10	4/20/11	4/17/12	4/24/13	5/1/14	4/3/15	4/28/16	4/17/17	4/3/18	4/16/19	4/17/20	4/13/21	4/12/22	4/17/23
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																											
Volatile Organic Compounds (VOCs)																													
Acetone	8260	µg/l	<5.0	<5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Benzene			<0.50	<0.50	NT	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			<5.0	<5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Carbon disulfide			<2.0	<2.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Chloroform			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			<2.0	<2.0	NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			<1.0	<1.0	35.4	34.4	44.2	42.3	42.0	41.9	37.0	33.4	33.6	40.0	53.3 J+	37.8	35.9	28.8	26.9	28.4	31.3	31.3	26.7	22.4	5.8	23	16	1.5	15
1,2-Dichloroethane			<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.36 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene			<1.0	<1.0	0.45 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.45 J	< 1.0	0.55 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			<1.0	<1.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			<250	<250	NT	NT	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250
Ethylbenzene			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			<5.0	<5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			<2.0	<2.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			<2.0	<2.0	NT	NT	2.4	3.1	2.2	2.5	2.2	2.3	2.0	1.9	7.5	1.2	2.4	1.8	7.1	0.94 J	1.5	1.1	1.9	1.6	<1.0	2.1	<2.0	<2.0	<2.0
Methylene chloride			<2.0	<2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene			<2.0	<2.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
Tert-amyl methyl ether			<2.0	<2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			<1.0	<1.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			<1.0	<1.0	3.0	3.8	2.2	2.9	2.7	2.5	2.4	2.1	2.0	1.7	2.8	1.6	2.1	2.1	1.5	1.0	1.3	2.0	0.90 J	<1.0	<1.0	1.4	1.1	<1.0	1.0
Tetrahydrofuran			<2.0	<2.0	NT	NT	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0
Toluene			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			<1.0	<1.0	< 1.0	< 1.0	< 1.0	0.31 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.50 J	0.80 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.26 J	0.62 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			<1.0	<1.0	< 1.0	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K+	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			<2.0	<2.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																													
Iron																													
Manganese																													
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																													
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																											
Ethane	8015	µg/l																											
Ethylene	8015	µg/l																											
Alkalinity	E310.1	µg/l																											
Chloride	E325.3	µg/l																											
Chlorine, Total Residual	E330.4	µg/l																											
Iron, Ferrous	3500FE B	µg/l																											
Nitrate & Nitrite as N	E353.2	µg/l																											
Nitrogen, Nitrate	E353.2	µg/l																											
Nitrogen, Nitrite	E354.1	µg/l																											
Sodium	6010C	µg/l																											
Sulfate	E375.4	µg/l																											
Sulfide	E376.1	µg/l																											
Surfactants	E425.1	µg/l																											
Total Organic Carbon	E415.1	µg/l																											

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW119S					MW119S																		MW119T													
Sample Name:			MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119S	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47
Sample Date:			8/22/07	10/12/07	1/15/08	4/16/08	7/15/08	10/22/08	1/13/09	4/13/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	4/2/15	4/28/16	4/18/17	4/3/18	4/16/19	4/17/20	4/14/21	4/13/22	4/17/23	8/22/07	10/12/07	1/16/08	4/16/08	7/15/08	10/22/08	1/13/09	4/13/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																					
Volatile Organic Compounds (VOCs)																																							
Acetone	8260	µg/l	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.4 K-	< 10	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 10
Benzene			< 0.50 J+	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0 J+	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	9.2 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10.4 J+	11.0	10.9	10.4	11.0	5.3	9.0	9.1	7.7	10.8 J+	10.2	9.4	6.4	5.9
1,2-Dichloroethane			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.0 J+	6.4	6.0	6.2	5.8	< 1.0	5.1	5.0	4.6	6.1 J+	5.4	7.0	4.4	4.2
cis-1,2-Dichloroethylene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.54 J J+	1.2	1.1	1.2	1.1	< 1.0	0.20 J	1.0	0.66 J	0.94 J J+	< 1.0	< 1.0	0.95 J	0.80 J
trans-1,2-Dichloroethylene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 50
Ethylbenzene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			5.2 J+	2.0	2.1	0.83 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	4.1 J+	0.66 J	0.64 J	0.50 J	< 1.0	< 1.0	0.47 J	0.37 J	0.34 J	< 1.0	< 1.0	< 1.0	< 1.0	9.1 K-
Methylene chloride			< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	94.3 J+	105	85.0	86.3	81.2	17.5	78.8	72.2	85.8	72.5	85.4	74.6	75.1	68.5
Tetrahydrofuran			< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	0.69 J	0.52 J	2.6	< 1.0	< 1.0	0.46 J	< 1.0	0.54 J	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	25.9 J+	29.6	26.7	26.8	26.7	6.7	24.9	23.7	26.4	23.0	27.1	23.2	21.0	21.3
Vinyl chloride			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																								
Iron																																								
Manganese																																								
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																								
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																																						
Ethane	8015	µg/l																																						
Ethylene	8015	µg/l																																						
Alkalinity	E310.1	µg/l																																						
Chloride	E325.3	µg/l																																						
Chlorine, Total Residual	E330.4	µg/l																																						
Iron, Ferrous	3500FE B	µg/l																																						
Nitrate & Nitrite as N	E353.2	µg/l																																						
Nitrogen, Nitrate	E353.2	µg/l																																						
Nitrogen, Nitrite	E354.1	µg/l																																						
Sodium	6010C	µg/l																																						
Sulfate	E375.4	µg/l																																						
Sulfide	E376.1	µg/l																																						
Surfactants	E425.1	µg/l																																						
Total Organic Carbon	E415.1	µg/l																																						

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW119T										MW120D																					
Sample Name:			MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW119T	MW120D	MW120D	MW120D	MW1120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D
Well Screen Interval (ft bgs):			42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	42 to 47	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38	28 to 38
Sample Date:			5/1/14	4/2/15	4/28/16	4/18/17	4/3/18	4/16/19	4/17/20	4/14/21	4/13/22	4/17/23	8/22/07	10/12/07	1/17/08	4/16/08	7/15/08	10/22/08	1/13/09	4/14/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	4/3/15	4/28/16	4/18/17	4/4/18	4/16/19	4/17/20	4/14/21	4/13/22	4/18/23
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																
Volatile Organic Compounds (VOCs)																																		
Acetone	8260	µg/l	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 10	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Benzene			< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Chloroform			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	12.0 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	0.85 J	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			5.6	5.9	4.4	4.9	4.0	1.8	4.3	2.7	1.1	2.6	23.0 J+	26.0	23.2	30.8	29.5	21.8	21.4	20.9	18.4	31.1 J+	25.1	23.1	17.0	15.8	16.2	16.2	11.6	11.4	12.8	3.1	16.0	12.0	3.8	1.7
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			4.1	4.5	3.4	3.7	2.4	<1.0	3.3	1.9	<1.0	2.6	15.6 J+	18.9	14.3	17.8	22.0	18.4	16.7	16.9	14.1	24.7 J+	19.4	23.8	15.5	14.8	16.7	16.8	8.2	9.7	14.1	1.3	14	10	1.6	1.6
cis-1,2-Dichloroethylene			< 1.0	0.70 J	0.65 J	0.82 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.70 J J+	< 1.0	1.7	1.9	1.9	1.6	0.70 J	1.6	1.5	1.8 J+	1.7	2.4	1.4	1.1	< 1.0	0.95 J	0.64 J	0.81 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 25	<130	<130	<250	<250	<250	<250	<250
Ethylbenzene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			1.5	0.98 J	< 1.0	0.55 J	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	6.8 J+	3.9	3.2	4.2	3.8	6.6	2.8	2.4	2.0	7.5	2.2	2.2	1.4	7.1 K-	0.78 J	1.1	< 1.0	1.1	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Methylene chloride			< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene			< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	0.68 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			56.4	54.5	55.7	50.6	33.0	2.6	52.0	32.0	3.1	36	93.5 J+	120	113	131	103	118	84.2	114	99.3	95.0	95.9	75.0	78.5	72.0	66.4	52.9	40.4	35.2	49.9	7.7	59.0	36.0	6.5	5.2
Tetrahydrofuran			< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			< 1.0	1.1	< 1.0	0.25 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10.3 J+	4.3	3.2	< 1.0	3.9	6.4	2.8	3.7	2.5	3.3	3.5	4.3	2.0	2.6	1.7	2.1	1.1	0.45 J	1.1	<1.0	1.2	1.2	<1.0	<1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			16.8	20.2	18.3	17.6	12.8	2.5	17.0	10.0	1.6	10.0	32.6 J+	40.1	34.7	43.4	38.7	33.2	30.4	33.8	32.0	33.1	34.8	28.3	26.1	23.6	22.1	21.4	15.7	13.8	18.6	3.4	21.0	14.0	2.9	2.0
Vinyl chloride			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	0.38 J	0.35 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.43 J	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	0.89 J	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																				
Iron																																				
Manganese																																				
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																				
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																																		
Ethane	8015	µg/l																																		
Ethylene	8015	µg/l																																		
Alkalinity	E310.1	µg/l																																		
Chloride	E325.3	µg/l																																		
Chlorine, Total Residual	E330.4	µg/l																																		
Iron, Ferrous	3500FE B	µg/l																																		
Nitrate & Nitrite as N	E353.2	µg/l																																		
Nitrogen, Nitrate	E353.2	µg/l																																		
Nitrogen, Nitrite	E354.1	µg/l																																		
Sodium	6010C	µg/l																																		
Sulfate	E375.4	µg/l																																		
Sulfide	E376.1	µg/l																																		
Surfactants	E425.1	µg/l																																		
Total Organic Carbon	E415.1	µg/l																																		

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW120S									MW120S														
Sample Name:			MW120S	MW120S	MW120S	MW1120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S
Well Screen Interval (ft bgs):			5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sample Date:			8/22/07	10/12/07	1/15/08	4/16/08	7/15/08	10/22/08	1/13/09	4/14/09	7/15/09	10/15/09	4/13/10	4/22/11	4/16/12	4/23/13	5/1/14	4/3/15	4/28/16	4/18/17	4/4/18	4/16/19	4/17/20	4/14/21	4/13/22	4/18/23
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																								
Volatile Organic Compounds (VOCs)																										
Acetone	8260	µg/l	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	4.2 J K-	< 10	< 10	< 10	9.3 J	<10	<10	<10	5.3	<5.0	<5.0	<5.0
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Carbon disulfide			0.56 J J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Chloroform			1.9 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			10.3 J+	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			1.1 J+	4.3	< 1.0	< 1.0	2.5	< 1.0	< 1.0	< 1.0	0.36 J	< 1.0	< 1.0	< 1.0	0.52 J	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			< 1.0	< 1.0	0.97 J	< 1.0	< 1.0	0.71 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	0.39 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																										
Iron																										
Manganese																										
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																										
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																								
Ethane	8015	µg/l																								
Ethylene	8015	µg/l																								
Alkalinity	E310.1	µg/l																								
Chloride	E325.3	µg/l																								
Chlorine, Total Residual	E330.4	µg/l																								
Iron, Ferrous	3500FE B	µg/l																								
Nitrate & Nitrite as N	E353.2	µg/l																								
Nitrogen, Nitrate	E353.2	µg/l																								
Nitrogen, Nitrite	E354.1	µg/l																								
Sodium	6010C	µg/l																								
Sulfate	E375.4	µg/l																								
Sulfide	E376.1	µg/l																								
Surfactants	E425.1	µg/l																								
Total Organic Carbon	E415.1	µg/l																								

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW121D																											
Sample Name:			MW121D 32.1 to 47.1 10/22/07	MW121D 32.1 to 47.1 1/15/08	MW121D 32.1 to 47.1 4/17/08	MW121D 32.1 to 47.1 7/14/08	MW901 32.1 to 47.1 7/14/08	MW121D 32.1 to 47.1 10/22/08	MW900 (FD) 32.1 to 47.1 10/22/08	MW121D 32.1 to 47.1 1/12/09	MW901 (FD) 32.1 to 47.1 1/12/09	MW121D 32.1 to 47.1 4/13/09	MW900 (FD) 32.1 to 47.1 4/13/09	MW121D 32.1 to 47.1 7/14/09	MW900 (FD) 32.1 to 47.1 7/14/09	MW121D 32.1 to 47.1 10/14/09	MW121D 32.1 to 47.1 4/12/10	MW121D 32.1 to 47.1 4/20/11	MW121D 32.1 to 47.1 4/16/12	MW121D 32.1 to 47.1 11/12/12	MW121D 32.1 to 47.1 4/23/13	MW121D 32.1 to 47.1 11/18/13	MW121D 32.1 to 47.1 4/30/14	MW121D 32.1 to 47.1 11/18/14	MW121D 32.1 to 47.1 4/2/15	MW121D 32.1 to 47.1 11/19/15	MW121D 32.1 to 47.1 4/28/16	MW121D 32.1 to 47.1 11/21/16	MW121D 32.1 to 47.1 4/17/17	MW121D 32.1 to 47.1 11/8/17	MW121D 32.1 to 47.1 4/3/18
Well Screen Interval (ft bgs):																														
Sample Date:																														
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																												
Volatile Organic Compounds (VOCs)																														
Acetone	8260	µg/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0 K-	< 5.0 K-	< 10	< 10 K-	< 10	< 10	< 10	< 10	8.7 J	< 10	< 10	< 10	< 10
Benzene			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			46.3	55.3	46.6	37.2	38.1	36.1	34.2	38.2	38.3	37.2	38.1	37.6	37.9	54.8	52.9	65.8	67.7	49.9	63.4	32.1	45.0	149.0	55.7	35.9	40.2	109.0	32.0	47.6	14.8
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			13.2	< 1.0	16.7	12.8	12.6	12.9 G	8.4 G	14.0	14.2	14.1	14.2	11.0	10.4	21.8	18.0	24.1	25.5	17.6	22.3	12.7	17.6	59.7 K+	23.5	14.5	14.9	35.9	14.8	15.3	7.6
cis-1,2-Dichloroethylene			3.9	11.8	6.4	21.8	22.6	83.7 G	41.2 G	134	138	80.0	78.4	105	106	253	279	217	178	122	193	67.2	133	316	186	73.6	108	271	79.9	119	24.8
trans-1,2-Dichloroethylene			< 1.0	0.70 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.8	< 1.0	< 1.0	2.9	< 1.0	1.5	0.57 J K+	<1.0	<1.0	<1.0	1.1	0.37 J	< 1.0	< 1.0
1,2-Dichloropropane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0
1,4-Dioxane			< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 50	< 25 K-	< 25 K-	<25	<25	<25	< 50	< 130	< 130	< 130
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	<2.0
Methyl tert-butyl ether			3.0	3.8	2.4	2.1	2.0	5.6	5.6	1.8	1.8	1.7	1.9	1.4	1.4	< 1.0	0.94 J	2.0	1.7	2.1	8.6 K-	2.7	2.3	7.1 K+	2.1	1.6	0.72 J	1.7	1.4	1.4	<1.0
Methylene chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0
Naphthalene			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethylene (PCE)			182	258	177	157	154	148 G	97.7 G	112	114	121	118	140	139	115	119	219	356	223	276	124	163	224	216	216	227	139	160	242	78
Tetrahydrofuran			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F+	< 10	< 10	< 10	< 10	< 10	< 10 F- K-	< 10	< 10	< 10 G	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene			0.51 J	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			1.2	1.3	1.2	1.1	1.0	4.9	4.6	0.87 J	0.86 J	1.0	< 1.0	0.95 J	1.0	< 1.0	0.62 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.53 J	0.44 J	1.4	0.56 J	1.1	< 1.0	0.45 J	< 1.0	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			59.6	136	68.8	71.0	72.0	48.3 G	69.0 G	36.5	36.3	62.3	70.7	76.3	76.5	146.0	96.3	233.0	342	207	342	115	236	432	266	148	262	176	159	310	39.7
Vinyl chloride			0.39 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.32 J	0.31 J	< 1.0	< 1.0	0.56 J	0.52 J	< 1.0	< 1.0	7.4	15.2	8.5	10.2	3.4	9.5	38.4 G K-	15	7.5	18.2	23.3	6.6	10.4	<1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																														
Iron																														
Manganese																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																														
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																												
Ethane	8015	µg/l																												
Ethylene	8015	µg/l																												
Alkalinity	E310.1	µg/l																												
Chloride	E325.3	µg/l																												
Chlorine, Total Residual	E330.4	µg/l																												
Iron, Ferrous	3500FE B	µg/l																												
Nitrate & Nitrite as N	E353.2	µg/l																												
Nitrogen, Nitrate	E353.2	µg/l																												
Nitrogen, Nitrite	E354.1	µg/l																												
Sodium	6010C	µg/l																												
Sulfate	E375.4	µg/l																												
Sulfide	E376.1	µg/l																												
Surfactants	E425.1	µg/l																												
Total Organic Carbon	E415.1	µg/l																												

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW121D											MW121S									MW121S													
Sample Name:			MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S	MW121S
Well Screen Interval (ft bgs):			32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sample Date:			11/15/18	4/15/19	11/22/19	4/16/20	11/18/20	4/13/21	11/30/21	4/13/22	11/29/22	4/18/23	11/7/23	10/22/07	1/15/08	4/17/08	7/14/08	10/22/08	1/12/09	4/13/09	7/14/09	10/14/09	4/12/10	4/20/11	4/16/12	4/23/13	4/30/14	4/2/15	4/28/16	4/17/17	4/3/18	4/15/19	4/16/20	4/13/21	4/13/22	4/13/22
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																		
Volatile Organic Compounds (VOCs)																																				
Acetone	8260	µg/l	< 10	< 10	< 10	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<5	<5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 5.0 J+	< 5.0	8.2 K-	< 10	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Benzene			< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			< 10	< 10	< 10	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<5	<5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Carbon disulfide			< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	13.4	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			< 1.0	< 1.0	< 1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			< 1.0	< 1.0	< 1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			14.0	18.8	18.0	16	12	18	18	18	38	24	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane			< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			7.0	7.7	8.7	8.6	8.0	7.5	6.3	2.3	7.3	5.5	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene			44.3	73.5	85.4	20	26	37	18	33	11	17	16	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			< 130	< 130	< 130	<250	<250	<250	<250	<250	<250	<250	<250	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 50	< 25 K-	< 25	< 25	<130	<130	<130	<250	<250	<250	<250	<250
Ethylbenzene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<5	<5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.3	3.3	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Methylene chloride			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene			< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 5.0	5.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0
Tert-amyl methyl ether			< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			47.5	48.2	64.8	87	58	72	52	1.9	54	35	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrahydrofuran			< 10	< 10	< 10	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 F+	< 10	< 10	< 10	< 10	< 10 G	< 10	< 10	<10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0
Toluene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			23.5	31.1	40.0	34	22	40	27	5	32.0	20.0	23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			6.1	9	4.5	<1.0	2.0	1.5	1.0	31.0	3.0	8.6	3.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			< 1.0	< 1.0	< 1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																				
Iron																																				
Manganese																																				
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																				
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																																		
Ethane	8015	µg/l																																		
Ethylene	8015	µg/l																																		
Alkalinity	E310.1	µg/l																																		
Chloride	E325.3	µg/l																																		
Chlorine, Total Residual	E330.4	µg/l																																		
Iron, Ferrous	3500FE B	µg/l																																		
Nitrate & Nitrite as N	E353.2	µg/l																																		
Nitrogen, Nitrate	E353.2	µg/l																																		
Nitrogen, Nitrite	E354.1	µg/l																																		
Sodium	6010C	µg/l																																		
Sulfate	E375.4	µg/l																																		
Sulfide	E376.1	µg/l																																		
Surfactants	E425.1	µg/l																																		
Total Organic Carbon	E415.1	µg/l																																		

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW122																						MW122											
Sample Name:			MW122 4 to 16 1/30/08 GEI	MW122 4 to 16 4/17/08 GEI	MW122 4 to 16 7/14/08 GEI	MW122 4 to 16 10/22/08 GEI	MW122 4 to 16 1/12/09 GEI	MW122 4 to 16 4/13/09 GEI	MW122 4 to 16 7/15/09 GEI	MW122 4 to 16 10/14/09 GEI	MW122 4 to 16 4/12/10 GEI	MW122 4 to 16 10/27/10 GEI	MW122 4 to 16 4/20/11 GEI	MW122 4 to 16 11/16/11 GEI	MW122 4 to 16 4/17/12 GEI	MW122 4 to 16 11/12/12 GEI	MW122 4 to 16 4/23/13 GEI	MW122 4 to 16 11/18/13 GEI	MW122 4 to 16 4/30/14 GEI	MW122 4 to 16 11/18/14 GEI	MW122 4 to 16 4/2/15 GEI	MW122 4 to 16 11/19/15 GEI	MW122 4 to 16 4/28/16 GEI	MW122 4 to 16 11/21/16 GEI	MW122 4 to 16 4/17/2017 GEI	MW122 4 to 16 11/8/2017 GEI	MW122 4 to 16 4/3/2018 GEI	MW122 4 to 16 11/15/2018 GEI	MW122 4 to 16 4/16/2019 GEI	MW122 4 to 16 11/22/2019 GEI	MW122 4 to 16 4/16/2020 GEI	MW122 4 to 16 11/18/2020 GEI	MW122 4 to 16 4/13/2021 GEI	MW122 4 to 16 11/30/2021 GEI	MW122 4 to 16 4/13/2022 GEI	MW122 4 to 16 11/29/2022 GEI	MW122 4 to 16 4/17/2023 GEI	MW122 4 to 16 11/7/2023 GEI
Well Screen Interval (ft bgs):																																				
Sample Date:																																				
Collected By:																																				
Analyte	**Method**	**Units**																																		
Volatile Organic Compounds (VOCs)																																				
Acetone	8260	µg/l	< 5.0 J+	9.6 J	11.1	7.2	5.7	< 5.0	< 5.0 F-	< 10	3.8 J+	< 5.0	17.8	< 5.0	< 5.0	< 25 K-	< 50	< 50 K-	< 20	< 20	< 20	< 10	9.4 J	< 40	< 50	< 10	<50	<50	<20	<50	<50	<50	<25	<100	<100	<50	<50	<5.0
Benzene			< 0.50	< 1.0	0.46 J	< 0.50	< 0.50	< 0.50	0.23 J	< 1.0	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 2.5	< 2.5	< 2.5	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 2.0	< 2.5	< 0.50	<2.5	<2.5	<1.0	<2.5	<5.0	<5.0	<2.5	<10	<10	<5	<5	<0.50
Bromodichloromethane			< 1.0	1.1 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
2-Butanone (MEK)			< 5.0 J+	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25 K-	< 25	< 25	< 10	< 10	< 10	17.3 J	< 10	< 40	< 50	< 10	<50	<50	<20	<50	<50	<50	<50	<100	<100	<50	<50	<5.0
Carbon disulfide			< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F-	< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	< 5.0	< 20	< 10	< 2.0	<10	<10	<4.0	<10	<20	<20	<5	<40	<40	<20	<20	<2.0
Carbon tetrachloride			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5	<20	<20	<10	<10	<1.0
Chlorobenzene			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
Chloroethane			< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 F-	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0 G	< 4.0	< 4.0	< 8.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<20	<20	<10	<40	<40	<20	<20	<2.0
Chloroform			< 1.0	< 2.0	< 1.0	0.61 J	< 1.0	< 1.0	< 1.0	0.75 J	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<10	<20	<20	<10	<10	<1.0
Chloromethane			< 2.0	< 4.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0 F-	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0 G	< 4.0	< 4.0	< 8.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<20	<20	<10	<40	<40	<20	<20	<2.0
1,4-Dichlorobenzene			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5	<20	<20	<10	<10	<1.0
1,1-Dichloroethane			19.3	30.4 C+	10.1	15.0	16.0	25.8	21.2	20.8	29.6	20.3	19.1	15.2	17.2	14.4	11.1	12.7	15.9	12.8	15.0	6.8	18.3	20.5	30.9	14.8	22.7	17.0	18.8	16.4	29	48	44	46	35	24	18	16
1,2-Dichloroethane			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
1,1-Dichloroethylene			4.0	9.0 C+	1.4	4.4	3.4	6.1	5.3 F-	6.6	7.3	4.6	8.3	4.1	6.4	4.7 J	4.1 J	4.4 J	5.1	3.8 K+	4.5	1.6 J	5.8	5.6	7.7	3.9	8.1	7.3	6.1	6.9	<10	12	6.9	<20	<20	<10	<10	7.7
cis-1,2-Dichloroethylene			60.6	70.7 C+	34.0	62.5	91.5	61.9	39.4	109.0	58.6	117	45.5	66.4	61.5	84.7	56.2	67.2	68.0	69.3	43.8	75.7	61.3	68.5	67.2	50	64.4	71.0	69.1	95.8	150	150	110	130	130	180	110	130
trans-1,2-Dichloroethylene			0.87 J	< 2.0	< 1.0	< 1.0	< 1.0	0.93 J	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0 K+	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<10	<20	<20	<10	<10	<1.0
1,2-Dichloropropane			< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	< 2.0	< 8.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<10	<20	<20	<10	<10	<1.0
1,4-Dioxane			< 25	< 50	< 25	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 50	< 25	< 25 K-	< 130	< 260	< 260	< 50 K-	< 50 K-	< 50	< 50	< 50	< 200	< 630	< 130	<630	<630	<250	<630	<2500	<2500	<1200	<5000	<5000	<2500	<2500	<250
Ethylbenzene			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
2-Hexanone			< 5.0 J+	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25 K-	< 10	< 10	< 10	< 10	< 10	< 40	< 25	< 5.0	<25	<25	<2.0	<25	<50	<50	<25	<100	<100	<50	<50	<5.0
4-Isopropyltoluene			< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	< 10	< 20	< 10	< 2.0	<10	<10	<4.0	<10	<20	<20	<20	<40	<40	<20	<20	<2.0
Methyl tert-butyl ether			3.3	3.9 C+	1.9	5.6	2.5	3.2	3.3	2.9	2.3	2.7	2.9	2.1	2.7	2.2 J	< 5.0 K-	< 5.0	1.5 J	2.6 K+	1.8	1.0 J	1.2	< 4.0	3.7	1.1	<5.0	<5.0	2.1	<5.0	<20	<20	<10	<40	<40	<20	<20	2.9
Methylene chloride			< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	1.1 J	< 2.0	39.4	< 10	< 2.0	<10	<10	<4.0	<10	<20	<20	<20	<40	<40	<20	<20	<2.0
Naphthalene			< 5.0	< 10	2.6 J	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	< 5.0	< 20	< 25	< 5.0	<25	<25	<10	<25	<20	<20	<10	<40	<40	<20	<20	<2.0
Tert-amyl methyl ether			< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	< 2.0	< 8.0	< 10	< 2.0	<10	<10	<4.0	<10	<20	<20	<10	<40	<40	<20	<20	<2.0
1,1,1,2-Tetrachloroethane			< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 25	< 25	< 25	< 10	< 10	< 10	< 10	< 5.0	< 20	< 25	< 5.0	<25	<25	<10	<25	<20	<20	<10	<40	<40	<20	<20	<2.0
Tetrachloroethylene (PCE)			477	691 C+	122	352 G	312	499 G	677	518	856	532	656	581	1000	811	938	726	592	499	784	326	734	684	910	579	959	1150	1060	961	1200	1400	820	1600	1700	1200	1700	1600
Tetrahydrofuran			< 10	< 20	< 10	< 10	< 10	< 10	< 10	< 20	< 10	< 10	< 20	< 10	< 10	< 50 F- K-	< 50	< 50	< 20 G	< 20	< 20	< 10	< 40	< 50	< 10	<50	<50	<2.0	<50	<20	<20	<10	<40	<40	<20	<20	<2.0
Toluene			0.48 J	< 2.0	2.8	3.7	0.64 J	2.4	1.6	< 4.0	6.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	6	< 2.0	0.79 J	0.72	< 2.0	< 1.0	< 4.0	< 5.0	20.7	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
1,1,1-Trichloroethane (TCA)			1.4	3.4 C+	0.63 J	5.1	1.1	1.7	1.7	< 2.0	1.5	< 1.0	7.5	1.4	2.2	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	2.0	< 2.0	0.92 J	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
1,1,2-Trichloroethane			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<10	<20	<20	<10	<10	<1.0
Trichloroethylene (TCE)			177	106 C+	27.0	56.9	59.6	91.7	90.2	81.1	119.0	82.1	73.1	79.0	103	88.0	93.4	76.0	98.9	58.9	82.9	44.9	98.3	87.1	102.0	63.3	110.0	122	121	131	140	170	130	220	210	160	170	200
Vinyl chloride			0.32 J	< 2.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0 F-	4.3	< 1.0	3.6	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0 K-	1.8	1.2	0.73 J	< 4.0	< 5.0	1.3	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	1.6
m,p-Xylene			< 1.0	< 2.0	0.92 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<20	<20	<10	<40	<40	<20	<20	<2.0
o-Xylene			< 1.0	< 2.0	0.67 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
Total Xylene			< 1.0	< 2.0	1.6 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 4.0	< 5.0	< 1.0	<5.0	<5.0	<2.0	<5.0	<10	<10	<5.0	<20	<20	<10	<10	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																																						
Iron																																						
Manganese																																						
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																						
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																																				
Ethane	8015	µg/l																																				
Ethylene	8015	µg/l																																				
Alkalinity	E310.1	µg/l																																				
Chloride	E325.3	µg/l																																				
Chlorine, Total Residual	E330.4	µg/l																																				
Iron, Ferrous	3500FE B	µg/l																																				
Nitrate & Nitrite as N	E353.2	µg/l																																				
Nitrogen, Nitrate	E353.2	µg/l																																				
Nitrogen, Nitrite	E354.1	µg/l																																				
Sodium	6010C	µg/l																																				
Sulfate	E375.4	µg/l																																				
Sulfide	E376.1	µg/l																																				
Surfactants	E425.1	µg/l																																				
Total Organic Carbon	E415.1	µg/l																																				

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:
B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW201				MW202																							
Sample Name:			MW201 11 to 21 7/19/07	MW201 11 to 21 10/12/07	MW201 11 to 21 1/11/08	MW201 11 to 21 4/15/08	MW202 10.5 to 20.5 7/19/07	MW202 10.5 to 20.5 10/12/07	MW202 10.5 to 20.5 1/11/08	MW202 10.5 to 20.5 4/15/08	MW202 10.5 to 20.5 7/15/08	MW202 10.5 to 20.5 10/21/08	MW202 10.5 to 20.5 1/13/09	MW202 10.5 to 20.5 4/15/09	MW202 10.5 to 20.5 7/14/09	MW202 10.5 to 20.5 10/14/09	MW202 10.5 to 20.5 4/12/10	MW202 10.5 to 20.5 4/22/11	MW202 10.5 to 20.5 4/17/12	MW202 10.5 to 20.5 4/23/13	MW202 10.5 to 20.5 5/1/14	MW202 10.5 to 20.5 4/2/15	MW202 10.5 to 20.5 4/29/16	MW202 10.5 to 20.5 4/17/17	MW202 10.5 to 20.5 4/4/18	MW202 10.5 to 20.5 4/16/19	MW202 10.5 to 20.5 4/17/20	MW202 10.5 to 20.5 4/14/21	MW202 10.5 to 20.5 4/13/22	MW202 10.5 to 20.5 4/18/23
Well Screen Interval (ft bgs):																														
Sample Date:																														
Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																												
Volatile Organic Compounds (VOCs)																														
Acetone	8260	µg/l	NT	< 5.0 J+	< 5.0	< 5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 10	< 10	9.7	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Benzene			NT	< 0.50	< 0.50	< 0.50	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 J+	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)			NT	< 5.0 J+	< 5.0	< 5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0
Carbon disulfide			NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Carbon tetrachloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0
Chloroform			NT	0.47 J	0.40 J	0.24 J	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.89 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane			NT	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
1,4-Dichlorobenzene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane			< 1.0	0.66 J	< 1.0	0.23 J	0.50 J	< 1.0	< 1.0	0.46 J	< 1.0	< 1.0	0.34 J	< 1.0	< 1.0	< 1.0	3.1	5.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			4.7	4.9	5.2	3.0	1.1	< 1.0	< 1.0	2.9	2.8	1.6	1.9	3.2	< 1.0	< 1.0	< 1.0	15.5	< 1.0	2.4	0.93 J	0.92 J	< 1.0	0.46 J	1.1	1.5	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			NT	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dioxane			NT	< 25	< 25	< 25	NT	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25 K-	< 50	< 50	<25	<25	<130	<130	<250	<250	<250	<250	<250
Ethylbenzene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-Hexanone			NT	< 5.0 J+	< 5.0	< 5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
4-Isopropyltoluene			NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	11.3	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methyl tert-butyl ether			NT	75.8	240	0.26 J	NT	< 1.0	< 1.0	1.2	< 1.0	< 1.0	0.92 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	<1.0	<1.0	1.0	<2.0	<2.0	<2.0	<2.0
Methylene chloride			NT	< 2.0	< 2.0	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Naphthalene			NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
Tert-amyl methyl ether			NT	4.6	17.7	< 2.0	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			NT	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			5.1	19.6	25.8	18.0	17.2	14.6	21.8	55.6	48.5	39.4	37.5	53.5	52.6	61.8	84.9	86.5	20.6	37.0	31.4	28.1	40.8	20.0	39.4	68.9	20.0	14.0	5.4	12.0
Tetrahydrofuran			NT	< 10	< 10	< 10	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0
Toluene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			9.8	36.3	32.9	7.3	12.5	4.4	4.2	35.2	18.9	7.1	8.0	15.7	6.6	14.3 J+	16.8	18.6	4.4	2.8	5.2	6.9	7.4	7.1	3.5	8.1	9.8	2.7	1.7	<1.0	1.2
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			4.5	7.2	8.2	6.4	2.2	1.5	1.6	6.9	8.6	5.3	5.6	11.8 J+	7.2	9.8	12.9	8.2	1.5	2.5	1.5	1.4	1.5	0.81 J	1.5	2.2	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
o-Xylene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylene			NT	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic																														
Iron																														
Manganese																														
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																														
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l																												
Ethane	8015	µg/l																												
Ethylene	8015	µg/l																												
Alkalinity	E310.1	µg/l																												
Chloride	E325.3	µg/l																												
Chlorine, Total Residual	E330.4	µg/l																												
Iron, Ferrous	3500FE B	µg/l																												
Nitrate & Nitrite as N	E353.2	µg/l																												
Nitrogen, Nitrate	E353.2	µg/l																												
Nitrogen, Nitrite	E354.1	µg/l																												
Sodium	6010C	µg/l																												
Sulfate	E375.4	µg/l																												
Sulfide	E376.1	µg/l																												
Surfactants	E425.1	µg/l																												
Total Organic Carbon	E415.1	µg/l																												

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:			MW203		MW-3													MW- CS1	SH-1	SH-3	SH-4	SH-MW1					SH-MW2								
Sample Name:			MW203	MW203	MW-3	MW-3	MW-3	MW-3	MW3	MW3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-CS1	SH-1	SH-3	SH-4	SH-MW1	SH-MW-1	SH-MW-1	SH-MW1	SHMW1	SH-MW2	SH-MW2	SH-MW-2	SH-MW-2	SH-MW2	SHMW2	SH-MW2	SH-MW2	SH-MW2	SH-MW2
Well Screen Interval (ft bgs):			6 to 18	6 to 18	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	9 to 14	8 to 13	11 to 16	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25
Sample Date:			7/19/07	4/15/08	7/1/02	8/9/04	5/23/06	1/17/07	4/17/07	4/15/08	7/15/08	10/21/08	1/14/09	4/14/09	7/15/09	10/16/09	5/23/07	5/23/07	8/9/04	8/9/04	5/25/06	7/8/02	5/23/06	10/4/06	1/16/07	4/12/07	7/8/02	8/16/04	5/23/06	10/4/06	1/16/07	4/16/07	7/19/07	4/28/17	4/4/18	4/16/19
Collected By:			GEI	GEI	SHA	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GeoInsight	GeoInsight	GEI	SHA	GEI	GEI	GEI	GEI	SHA	GeoInsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**																																	
Volatile Organic Compounds (VOCs)																																			
Acetone	8260	µg/l	NT	< 250	< 2500	< 2000	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4000	< 2000	30.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 2000	< 5.0	< 5.0	< 5.0	< 10	NT	<10	<10	<10
Benzene			NT	< 25	< 250	< 100	0.37 J	0.71	< 13	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 200	< 100	< 0.50	< 250	< 0.50	0.61	< 0.50	0.33 J	< 25	< 100	< 0.50	< 0.50	< 0.50	< 1.0	NT	<0.50	<0.50	<0.50
Bromodichloromethane			NT	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
2-Butanone (MEK)			NT	< 250	< 2500	< 1000	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 1000	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 1000	< 5.0	< 5.0	< 5.0	< 10	NT	<10	<10	<10
Carbon disulfide			NT	< 250	< 2500	< 5.0	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.54 J	< 1000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 10	NT	<2.0	<2.0	<2.0
Carbon tetrachloride			< 1.0	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0
Chlorobenzene			NT	< 50	< 250	< 100	< 1.0	0.52 J	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	0.52 J	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
Chloroethane			< 2.0	< 100	< 5.0	< 200	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 200	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 200	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	<1.0	<1.0	<1.0
Chloroform			NT	< 50	< 380	< 100	2.1	3.4	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	13.3	< 380	2.1	4.6	1.7	3.4	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
Chloromethane			NT	< 100	< 1200	< 200	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 200	< 2.0	< 1200	< 2.0	< 2.0	< 2.0	< 2.0	< 120	< 200	< 2.0	< 2.0	< 2.0	< 4.0	NT	<1.0	<1.0	<1.0
1,4-Dichlorobenzene			NT	< 50	< 1200	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 1200	< 1.0	< 1.0	< 1.0	< 1.0	< 120	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
1,1-Dichloroethane			22.2	13.0 J	< 380	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	15.9	< 380	11.4	12.0	8.5	12.7	< 38	< 100	1.0	20.9	5.7	< 2.0	12.4	<1.0	<1.0	<1.0
1,2-Dichloroethane			< 1.0	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	103	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene			76.4	36.6 J	< 250	< 100	6.9	5.6	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	556 E	< 250	11.7	19.3	9.0	24.4	< 25	< 100	10.1	45.0	9.8	2.1	23.8	0.65 J	<1.0	<1.0
cis-1,2-Dichloroethylene			102	78.9	< 250	< 100	< 1.0	1.9	< 25	< 1.0	0.56 J	< 1.0	< 1.0	< 1.0	0.43 J	2.3 J+	< 1.0	< 1.0	< 200	< 100	16.6	< 250	2.1	7.3	11.2	2.7	< 25	< 100	3.9	45.7	14.7	1.4 J	26.1	1.7	2.3	3.1
trans-1,2-Dichloroethylene			1.2	< 50	< 380	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 380	< 1.0	< 1.0	< 1.0	< 1.0	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane			NT	< 100	< 880	< 100	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 100	< 2.0	< 880	< 2.0	< 2.0	< 2.0	< 2.0	< 88	< 100	< 2.0	< 2.0	< 2.0	< 4.0	NT	<1.0	<1.0	<1.0
1,4-Dioxane			NT	< 1300	NT	NT	< 25	< 25	< 630	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	NT	NT	NT	57700	NT	< 25	< 25 R	< 25	< 25	NT	NT	< 25	< 25 R	< 25	< 5.0	NT	<130	<130	<130
Ethylbenzene			NT	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
2-Hexanone			NT	< 250	< 2500	< 1000	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 1000	5.3	NT	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 1000	< 5.0	< 5.0	< 5.0	< 10	NT	<5.0	<5.0	<5.0
4-Isopropyltoluene			NT	< 250	< 250	< 100	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200	< 100	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 100	< 5.0	< 5.0	< 5.0	< 10	NT	<2.0	<2.0	<2.0
Methyl tert-butyl ether			NT	< 50	< 5.0	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	66.4	< 200	< 100	< 1.0	< 5.0	< 1.0	0.71 J J+	< 1.0	0.74 J J+	< 5.0	< 100	< 1.0	8.7 J+	1.4	< 2.0	NT	<1.0	<1.0	<1.0
Methylene chloride			NT	< 100	< 2500	< 1000	< 2.0	< 2.0	71.5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2000	< 1000	12.2	< 2500	< 2.0	< 2.0	< 2.0	< 2.0	< 250	< 1000	< 2.0	< 2.0	< 2.0	2.3 J	NT	<2.0	<2.0	<2.0
Naphthalene			NT	< 250	< 1200	< 100	< 5.0	< 5.0	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 200	< 5.0	< 5.0	< 1200	< 5.0	< 5.0	< 5.0	< 5.0	< 120	< 100	< 5.0	< 5.0	< 5.0	< 10	NT	<5.0	<5.0	<5.0
Tert-amyl methyl ether			NT	< 100	NT	NT	< 2.0	< 2.0	< 50	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	NT	NT	NT	1.9 J	NT	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 4.0	NT	<2.0	<2.0	<2.0
1,1,1,2-Tetrachloroethane			NT	< 250	< 250	< 100	1.9 J	4.4 J	< 130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200	< 100	40.4	< 250	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 25	< 100	< 5.0	< 5.0	< 5.0 F+	< 10	NT	<1.0	<1.0	<1.0
Tetrachloroethylene (PCE)			15500	11500	16000	16200	22100	51900	6550	400	427	606	176	141	280	391	< 1.0	49700	19500	7240	21000	16200	28300	31700 F+	48900	2000	7170	1730	7190	2880 F+	726	3320	365	459	439
Tetrahydrofuran			NT	< 50	NT	NT	< 10	< 10	< 250	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	NT	< 10	NT	< 10	< 10	< 10	< 10	NT	NT	< 10	< 10	< 10	< 20	NT	<10	<10	<10
Toluene			NT	< 50	< 380	< 100	0.62 J	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	1.8	< 380	0.61 J	0.47 J	< 1.0	0.36 J	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
1,1,1-Trichloroethane (TCA)			1710	988	< 250	< 100	39.1	68.7	11.1 J	< 1.0	0.43 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1150	2070	7610	< 250	34.5	69.7 J+	31.4	27.9 J+	660	1550	158	1330	360	44.1	539	6.8	7.9	14.8
1,1,2-Trichloroethane			0.66 J	< 50	< 380	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	172	< 380	< 1.0	< 1.0	< 1.0	< 1.0	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0
Trichloroethylene (TCE)			979	618	< 250	< 100	86.6	247	13.8 J	1.9	3.5	4.2	1.3	1.3	2.7	3.6	< 1.0	906	1440	7580	< 5.0	141	317	141	159	190	572	92.8	486	171	26.5	354	13.2	14.8	16.7
Vinyl chloride			< 1.0	< 50	< 5.0	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	0.55 J	< 5.0	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0
m,p-Xylene			NT	< 50	< 250	< 200	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 400	< 200	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 200	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
o-Xylene			NT	< 50	< 250	< 100	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
Total Xylene			NT	< 50	ND	ND	< 1.0	< 1.0	< 25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	ND	< 1.0	ND	< 1.0	< 1.0	< 1.0	< 1.0	ND	ND	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0
Metals (Total)	6010B	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Arsenic																																			NT
Iron																																			NT
Manganese																																			<15
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron																																			
Others			NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Methane	8015	µg/l																NT																		0.21
Ethane	8015	µg/l																NT																		<0.23
Ethylene	8015	µg/l																NT																		<0.31
Alkalinity	E310.1	µg/l																NT																		143000
Chloride	E325.3	µg/l																275000																		38600
Chlorine, Total Residual	E330.4	µg/l																< 50																		<100
Iron, Ferrous	3500FE B	µg/l																NT																		<200
Nitrate & Nitrite as N	E353.2	µg/l																NT																		2600
Nitrogen, Nitrate	E353.2	µg/l																NT																		2600
Nitrogen, Nitrite	E354.1	µg/l																NT																		<10
Sodium	6010C	µg/l																NT																		NT
Sulfate	E375.4	µg/l																NT																		62900
Sulfide	E376.1	µg/l																NT																		<2000
Surfactants	E425.1	µg/l																NT																		<100
Total Organic Carbon	E415.1	µg/l																NT																		1900

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	SH-MW3												COBBLE-IR-1
		Sample Name:	SH-MW3 10 to 24 7/8/02	SH-MW-3 10 to 24 5/23/06	SH-MW-3 10 to 24 10/4/06	SH-MW3 10 to 24 1/17/07	SHMW3 10 to 24 4/12/07	SHMW3 10 to 24 4/15/08	SHMW3 10 to 24 4/13/10	SHMW3 10 to 24 4/21/11	SH-MW3 10 to 24 4/16/12	SH-MW3 10 to 24 4/23/13	SH-MW3 10 to 24 4/30/14	SH-MW3 10 to 24 4/2/15	COBBLE-IR-1 Unknown 6/25/07
		Well Screen Interval (ft bgs):													
		Sample Date:													
		Collected By:	SHA	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**													
Volatile Organic Compounds (VOCs)															
Acetone	8260	µg/l	< 2500	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 500	< 10	< 500	5.8
Benzene			< 250	< 0.50	< 0.50	< 50	< 0.50	< 500	< 0.50	< 50	< 25	< 25	< 0.50	< 25	< 0.50
Bromodichloromethane			< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	0.32 J
2-Butanone (MEK)			< 2500	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Carbon disulfide			< 2500	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Carbon tetrachloride			< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Chlorobenzene			< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Chloroethane			< 5.0	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
Chloroform			< 380	0.88 J	0.81 J	< 100	1.1	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	5.6
Chloromethane			< 1200	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
1,4-Dichlorobenzene			< 1200	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,1-Dichloroethane			< 380	21.6	36.5	< 100	24.5	< 100	19.5	< 100	< 50	< 50	12.6	24.0 J	< 1.0
1,2-Dichloroethane			< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,1-Dichloroethylene			< 250	91.0	84.4	< 100	91.3	< 100	14.2	< 100	< 50	< 50	12.5	<50	< 1.0
cis-1,2-Dichloroethylene			< 250	37.2	102	< 100	39.8	34.5 J	19.8	< 100	< 50	< 50	40.1	27.7 J	< 1.0
trans-1,2-Dichloroethylene			< 380	< 1.0	1.1	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,2-Dichloropropane			< 880	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
1,4-Dioxane			NT	< 25	< 25 R	< 2500	< 25	< 2500	< 25	< 2500	< 1300	< 2600	< 25 K-	<1300	< 25
Ethylbenzene			< 250	< 1.0	< 1.0	180	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
2-Hexanone			NT	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
4-Isopropyltoluene			< 250	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Methyl tert-butyl ether			< 5.0	5.1	8.2 J+	< 100	2.4 J+	< 100	0.83 J	< 100	< 50	< 50 K-	< 1.0	< 50	< 1.0
Methylene chloride			< 2500	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	450	< 100	< 100	< 2.0	< 100	< 2.0
Naphthalene			< 1200	< 5.0	< 5.0	392 J	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0
Tert-amyl methyl ether			NT	< 2.0	< 2.0	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0
1,1,1,2-Tetrachloroethane			< 250	< 5.0	< 5.0	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	<50	< 5.0
Tetrachloroethylene (PCE)			26000	16900	28300	29700	34000	15200	20300	16900	7310	9650	14500	12800	< 1.0
Tetrahydrofuran			NT	< 10	< 10	< 1000	< 10	< 1000	< 10	< 1000	< 500	< 500	< 10 G	< 500	< 10
Toluene			< 380	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
1,1,1-Trichloroethane (TCA)			1200	989	1680	806	621 E J+	119	19.8 J	< 100	83.0	< 50	48.0	49.9 J	< 1.0
1,1,2-Trichloroethane			< 380	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Trichloroethylene (TCE)			870	482	1030	709	1030	306	383.0	342	152	157	231	218	< 1.0
Vinyl chloride			< 5.0	< 1.0	< 1.0	< 100	0.83 J	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
m,p-Xylene			< 250	< 1.0	< 1.0	484	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
o-Xylene			< 250	< 1.0	< 1.0	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Total Xylene			ND	< 1.0	< 1.0	543	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0
Metals (Total)	6010B	µg/l	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic						< 10									
Iron						255									
Manganese						NT									
Metals (Dissolved)	6010C	µg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron															
Others			NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT
Methane	8015	µg/l				< 10									
Ethane	8015	µg/l				< 10									
Ethylene	8015	µg/l				< 10									
Alkalinity	E310.1	µg/l				208000									
Chloride	E325.3	µg/l				362000									
Chlorine, Total Residual	E330.4	µg/l				NT									
Iron, Ferrous	3500FE B	µg/l				NT									
Nitrate & Nitrite as N	E353.2	µg/l				1900									
Nitrogen, Nitrate	E353.2	µg/l				1900									
Nitrogen, Nitrite	E354.1	µg/l				30									
Sodium	6010C	µg/l				NT									
Sulfate	E375.4	µg/l				62600									
Sulfide	E376.1	µg/l				< 2000									
Surfactants	E425.1	µg/l				< 100									
Total Organic Carbon	E415.1	µg/l				< 1000									

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "< " = The analyte was not detected at a concentration above the specified reporting limit.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.

Qualifying Notes:

B The analyte found in associated method blank.
C+ The result has a high bias due to surrogate recovery above upper control limits.
E The value exceeds the calibration range.
F+ The result has a high bias due to matrix spike recovery above upper control limits.
F- The result has a low bias due to matrix spike recovery below lower control limits.
G The result is estimated due to duplicate precision outside control limits.
J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.
K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-3. Chemical Testing Results - GLX Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	KE-114		KE-115		KE-116		KE-117			MW-5R	WashSW[(b)]	KE-202D
		Sample Name:	KE-114	KE-114	KE-115	KE-115	KE-116	KE-116	KE-117	KE-117[(a)]	KE-117	MW-5R	WashSW[(b)]	KE-202D
		Well Screen Interval (ft bgs):	5 to 30	5 to 30	5 to 30	5 to 30	5 to 30	5 to 30	5 to 20	5 to 20	5 to 20	5 to 30	Vac-Ex	~25 to 35
		Sample Date:	9/27/12	2/6/14	9/27/12	2/6/14	9/27/12	2/6/14	9/27/12	2/6/14	4/9/14	2/6/14	2/6/14	4/8/14
		Collected By:	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder
Analyte	**Method**	**Units**												
Volatile Organic Compounds (VOCs)	SW-846 8260C	µg/l												
Acetone			< 10	< 10	< 10	< 10	< 10	< 10	56	< 10	< 20	< 10	< 10	< 20
Benzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	3.8	< 1.0	< 1.0	< 1.0	< 1.0
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	73	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	12	< 1.0	< 1.0	4.4	< 1.0
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	8.0	< 1.0	< 1.0	1.8	< 1.0
cis-1,2-Dichloroethylene			< 1.0	< 1.0	1.8	1.0	< 1.0	< 1.0	< 5.0	410	2.8	< 1.0	26	12
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	7.2	< 1.0
Methyl tert-butyl ether			< 1.0	< 1.0	1.4	2.4	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethylene (PCE)			< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	760	4.3	< 1.0	2000	33
Tetrahydrofuran			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	3.3	< 2.0
Toluene			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	2.8	< 1.0
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	11	< 1.0	< 1.0	13	< 1.0
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 5.0	150	1.2	< 1.0	38	5.0
1,2,4-Trimethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0
Vinyl chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	19	< 2.0	< 2.0	< 2.0	< 2.0
m,p-Xylene			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	37	< 2.0
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 2.0	< 1.0	19	< 2.0

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting limit.

Footnote:

(a) The groundwater sample from KE-117 on February 6, 2014 was collected during overpumping of the well to simulate construction dewatering conditions and was not collected via low flow sampling techniques.

(b) WashSW was a grab sample collected from the base of an open excavation within Washington Street.

Table 4-3. Chemical Testing Results - GLX Groundwater Sampling
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

		Sample Location:	**KE-202S**	**KE-204**	**KE-205**	**KE-206**	**KE-207**	**KE-208**	**KE209**	**KE-210**	**GLC-WASH-MW-4**	**GLC-WASH-MW-2**
		Sample Name:	**KE-202S**	**KE-204**	**KE-205**	**KE-206**	**KE-207**	**KE-208**	**KE209**	**KE-210**	**GLC-WASH-MW-4-082520**	**GLC-WASH-MW-2-082520**
		Well Screen Interval (ft bgs):	**5 to 20**	**15 to 25**	**9.5 to 19.5**	**10 to 21**	**8 to 18**	**4 to 14**	**9 to 19**	**8.5 to 18.5**	**15-30**	**15-30**
		Sample Date:	**4/8/14**	**4/14/14**	**4/15/14**	**4/14/14**	**4/15/14**	**4/14/14**	**4/15/14**	**4/15/14**	**8/25/20**	**8/25/20**
		Collected By:	**Kleinfelder**	**Kleinfelder**	**Kleinfelder**	**Kleinfelder**	**Kleinfelder**	**Kleinfelder**	**Kleinfelder**	**Kleinfelder**	**TRC**	**TRC**
Analyte	**Method**	**Units**										
Volatile Organic Compounds (VOCs)	SW-846 8260C	µg/l										
Acetone			< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	NT	NT
Benzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT
1,1-Dichloroethane			< 1.0	3.4	< 1.0	6.0	< 1.0	< 1.0	< 1.0	1000	NT	NT
1,1-Dichloroethylene			< 1.0	2.6	< 1.0	4.6	< 1.0	< 1.0	< 1.0	790	NT	NT
cis-1,2-Dichloroethylene			< 0.40	83	< 1.0	89	< 1.0	1.2	< 1.0	8.4	<1.0	<1.0
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
Methyl tert-butyl ether			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	71	NT	NT
Tetrachloroethylene (PCE)			< 1.0	14000	1.0	12000	2.5	73	< 1.0	14000	11	11
Tetrahydrofuran			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT
Toluene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
1,1,1-Trichloroethane (TCA)			< 1.0	16	< 1.0	35.0	< 1.0	< 1.0	< 1.0	860	NT	NT
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.8	NT	NT
Trichloroethylene (TCE)			< 1.0	81.0	< 1.0	86.0	< 1.0	2.0	< 1.0	24000	1.6	<1.0
1,2,4-Trimethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
Vinyl chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.6	<1.0	<1.0
m,p-Xylene			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT
o-Xylene			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting limit.

Footnote:

(a) The groundwater sample from KE-117 on February 6, 2014 was collected during overpumping of the well to simulate construction dewatering conditions and was not collected via low flow sampling techniques.
(b) WashSW was a grab sample collected from the base of an open excavation within Washington Street.

Table 4-4. Chemical Testing Results - Sub Slab Soil Vapor
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
31 Tufts Street
Somerville, Massachusetts

			Sample Location:	31 Tufts Street	
			Sample Name:	045163-31Tufts-SV-1	045163-31Tufts-SV2
			Sample Date:	10/17/2023	10/27/2023
			Collected By:	GEI	GEI
	Method	Units	Residential Sub-Slab Screening Values		
trans-1,2-Dichloroethene	TO-15 SIM	µg/m^3	56	<0.159	0.119
1,1,2,2-Tetrachloroethane			2.8	<0.275	1.4
Tetrachloroethene			98	59	59
1,1,1-Trichloroethane			210	2.9	9.0
Trichloroethene			28	1.4	2.4

General Notes

1. Analytes detected above the laboratory reporting limit are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m3 = micrograms per cubic meter.
3. Residential Screening Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.

Table 4-5. Chemical Testing Results - Sub-Slab Soil Vapor
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
103 Washington Street
Somerville, Massachusetts

Location Name:		Location Name:		103 Washington Street							
Sample Name:		Sample Name:		103Wash-SV1				103Wash-SV2			
Sample Date:		Sample Date:		5/10/2023		7/6/2023		5/10/2023		7/6/2023	
Units:		Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**	**Residential Sub-Slab Soil Gas Screening Values (µg/m³)**	**Commercial Sub-Slab Soil Gas Screening Values (µg/m³)**								
Volatile Organic Compounds (VOCs)	TO-15										
1,1-Dichloroethylene		56	12000	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	0.107	0.027
cis-1,2-Dichloroethylene		56	370	1.95	0.493	2.32	0.585	9.48	2.39	19.2	4.83
trans-1,2-Dichloroethylene		56	3700	1.17	0.295	2.39	0.603	6.66	1.68	7.41	1.87
Tetrachloroethylene (PCE)		98	290	28.5	4.21	51.5	7.60	189	27.9	188	27.7
1,1,1-Trichloroethane		210	310000	<0.109	<0.020	0.115	0.021	0.175	0.032	0.278	0.051
Trichloroethylene (TCE)		28	120	9.46	1.76	15.7	2.92	98.3	18.3	130	24.1

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Table 4-6. Chemical Testing Results - Indoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
31 Tufts Street
Somerville, Massachusetts

			Sample Location:	31 Tufts Street		
			Sample Name:	045163-31Tufts-IA1	045163-31Tufts-IA2	045163-31Tufts-IA3
			Sample Date:	10/17/2023	10/17/2023	10/17/2023
			Collected By:	GEI	GEI	GEI
Analyte	**Method**	**Units**	**Residential Indoor Air Threshold Values**			
Volatile Organic Compounds (VOCs)	TO-15 SIM	$\mu g/m^3$				
Tetrachloroethene			1.4	<0.136	0.203	0.176

General Notes

1. Analytes detected above the laboratory reporting limit are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m3 = micrograms per cubic meter.
3. Residential Threshold Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.

Table 4-7. Chemical Testing Results - Indoor Air

Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
103 Washington Street
Somerville, Massachusetts

				Sample Location:	First Floor				Basement	
				Sample Name:	103Wash-F1		103Wash-F1		103Wash-B1	
				Sample Date:	5/10/23		7/6/23		7/6/23	
				Units:	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**	**MassDEP Commerical Indoor Air Threshold Values (µg/m^3)**							
Volatile Organic Compounds (VOCs)	TO-15									
cis-1,2,-Dichloroethylene		0.8	5.3		<0.079	<0.020	0.107	0.027	0.599	0.151
trans-1,2-Dichloroethylene		0.8	53		0.194	0.049	0.852	0.215	6.50	1.64
Tetrachloroethylene (PCE)		1.4	4.1		0.278	0.041	0.692	0.102	2.28	0.336
Trichloroethylene (TCE)		0.4	1.8		<0.107	<0.020	0.204	0.038	0.919	0.171

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.
6. A sample was not collected from the basement in May 2023 due to fresh air introduction during construction acvities.

Table 4-8. Summary of Meteorological Data During Air Sampling Events
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location	Sample Date	Sample Location	Outside Temperature (ºF)[1,3]		Outside Barometric Pressure (in. Hg)[2,4]		Prevailing Wind Direction		General Weather Conditions		Significant precipitation within 12 hours prior to Sampling?
			Start	End	Start	End	Start	End	Start	End	
Residences											
31 Tufts Street	10/16/2023-10/17/2023	31Tufts-IA1	56	52	29.48	29.85	NNW	NNW	light rain, cloudy	Partly cloudy	Yes
		31Tufts-IA2									
		31Tufts-IA3									
	10/17/2023	31Tufts-SV1	57		29.85		NNW		Partly Cloudy		Yes
	10/27/2023	31Tufts-SV2	70		30.06		West		Partly Cloudy		No
103 Washington Street	7/5/2023-7/6/2023	103Wash-F1	80	85	29.97	29.94	Northwest	South	Sunny	Sunny	Yes
		103Wash-B1									
		103Wash-SV1	89		29.9		South		Sunny		
		103Wash-SV2									

General Notes:

1. ºF = degrees Fahrenheit.
2. in. Hg = inches of mercury.
3. Temperatures were measured in the field using a hand-held thermometer.
4. Barometric pressures were measured in the field with a digital barometer.
5. NM = Not Measured.
6. NA = Not Applicable.
7. 31 Tufts Street sample 31Tufts-SV2 collected on 10/27/2023 because attempt on 10/17/2023 did not yield sufficient sample volume.

Table 5-1. Summary of SSDS Monitoring Events - Capuano Center
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
7/28/2023	1	SSDS Quarterly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes.	No
10/12/2023	2	SSDS Quarterly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes.	No

General Notes:

1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VOC measurements collected with a ppm-RAE calibrated to 100 parts per million (ppm) isobutylene.
5. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Cafetorium		Room 101				Room 108				Room 121		Room 122						Room 125				Room 126					
Sample ID:		150 GLEN-CAF		150 GLEN-ROOM 101A		150 GLEN-ROOM 101B		150 GLEN-ROOM 108A		150 GLEN-ROOM 108B		150 GLEN-ROOM 121		150 GLEN-ROOM 122		150 GLEN-RM 122		150 GLEN-RM 122		150 GLEN-ROOM 125A		150 GLEN-ROOM 125B		150 GLEN-ROOM 126		150 GLEN-ROOM 100 (FD-Room 126)		150 GLEN-RM 126	
Sample Date:		1/6/07		12/27/06		12/28/06		12/27/06		12/28/06		1/6/07		1/6/07		2/7/07		5/23/15		12/27/06		12/28/06		1/13/07		1/13/07		2/7/07	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.49 J J+	0.078 J J+	< 1.3	< 0.20	< 1.3	< 0.20	0.94 J	0.15 J	< 1.3	< 0.20	0.52 J J+	0.082 J J+	0.51 J	0.081 J J+	0.69 J	0.11 J	NT	NT	1.0 J	0.16 J	< 1.3	< 0.20	0.69 J	0.11 J	0.63 J	0.10 J	0.94 J	0.15 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		0.88 J J+	0.13 J J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	0.88 J	0.13 J	0.75 J	0.11 J	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 126 (continued)																									
Sample ID:		150GLEN-ROOM 126		150 GLEN-ROOM 126		150 GLEN-RM 126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126	
Sample Date:		3/8/07		4/20/07		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/172008		4/21/08	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.60 J	0.095 J	0.69 J	0.11 J	0.82 J	0.13 J	< 1.3	< 0.20	0.69 J	0.11 J	0.59 J	0.093 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 126 (continued)																		Room 134						Room 136		Room 137			
Sample ID:		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150 GLEN-ROOM 134		150 GLEN-RM 134		150 GLEN-RM 134		150 GLEN-ROOM 136		150 GLEN-ROOM 137A		150 GLEN-ROOM 137B	
Sample Date:		8/18/08		11/24/08		3/2/09		8/27/09		11/11/09		2/19/10		11/11/10		3/17/11		5/23/15		1/13/07		2/7/07		5/23/15		1/13/07		1/6/07		1/6/07	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																														
Volatile Organic Compounds (VOCs)	TO-15																														
Carbon tetrachloride		0.60 J	0.096 J	0.60 J	0.096 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	0.75 J	0.12 J	0.94 J	0.15 J	NT	NT	0.69 J	0.11 J	0.52 J J+	0.082 J J+	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	3.2	0.47	< 1.4	< 0.20	< 1.4	< 0.20	2.1	0.31	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	0.54 J	0.10 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 138																									
Sample ID:		RM138		150 GLEN-ROOM 138		150 GLEN-ROOM 138		150 GLEN-ROOM 138		150 GLEN-ROOM 138 (Alpha duplicate)		150 GLEN-RM 138		150 GLEN-RM 139 (FD-Room 138)		150GLEN-ROOM 138		150GLEN-ROOM 139 (FD-Room 138)		150 GLEN-ROOM 138		150GLEN-ROOM 139 (FD-Room 138)		150 GLEN-RM 138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138	
Sample Date:		1/2/07		1/6/07		1/13/07		1/26/07		1/26/07		2/7/07		2/7/07		3/8/07		3/8/07		4/20/07		4/20/07		5/17/07		5/17/07		7/30/07	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		< 1.3	< 0.20	0.49 J J+	0.078 J J+	0.82 J	0.13 J	0.82 J	0.13 J	< 0.126	< 0.020	0.75 J	0.12 J	0.52 J	0.082 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.61 J	0.097 J
Dichloroethane,1,1-		0.45 J	0.11 J	0.77 J J+	0.19 J J+	0.57 J	0.14 J	0.65 J	0.16 J	< 0.081	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.079	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	2.1 J+	0.54 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.079	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	0.83 J+	0.21 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.0819	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+
Tetrachloroethylene (PCE)		14	2.0	60 J+	8.8 J+	20	3.0	20	3.0	32.6	4.8	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.17 J
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.109	< 0.020	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		2.3	0.42	7 J+	1.3 J+	3.1	0.57	3.3	0.61	4.26	0.794	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

	Sample Location:	Room 138 (continued)																									
	Sample ID:	150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM239 (FD-Room 138)		150GLEN-RM238 (FD-Room 138)		150GLEN-RM138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM238 (FD-Room 138)		150GLEN-RM239 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138	
	Sample Date:	7/30/07		9/10/07		9/10/07		10/8/07		10/8/07		10/8/07		10/8/07		10/14/07		10/14/07		10/14/07		10/14/07		11/15/07		11/15/07		12/13/07	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		0.69 J	0.11 J	0.69 J	0.11 J	0.69 J	0.11 J	0.69 J	0.11 J	0.88 J	0.14 J	0.82 J	0.13 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.59 J	0.094 J	0.62 J	0.099 J	0.69 J	0.11 J	0.69 J	0.11 J	0.57 J	0.091 J
Dichloroethane,1,1-		< 0.81 J+	< 0.20 J+	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81 J+	< 0.20 J+	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79 J+	< 0.20 J+	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79 J+	< 0.20 J+	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		1.1 J	0.16 J	< 1.4 J+	< 0.20 J+	6.5	0.96	< 1.4	< 0.20	1.5	0.22	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1 J+	< 0.20 J+	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1 J+	< 0.20 J+	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 138 (continued)																									
Sample ID:		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138	
Sample Date:		12/13/07		1/21/08		1/21/08		2/19/08		2/19/08		2/22/08		2/22/08		3/17/08		3/17/08		4/21/08		4/21/08		8/18/08		8/18/08		11/24/08	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	0.69 J	0.11 J	0.69 J	0.11 J	0.63 J	0.10 J	0.62 J	0.098 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.8	0.27	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 138 (continued)																									
Sample ID:		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138	
Sample Date:		11/24/08		3/2/09		3/2/09		8/27/09		8/27/09		11/11/09		11/11/09		2/19/10		2/19/10		11/11/10		11/11/10		3/17/11		3/17/11		5/23/15	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.53	< 0.13	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.52	< 0.13	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.37	< 0.094	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 0.82	< 0.12	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 0.95	< 0.14	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 0.76	< 0.14	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 0.70	< 0.13	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 141																									
Sample ID:		150 GLEN-ROOM 141		150GLEN-ROOM 141		150 GLEN-ROOM 141		150 GLEN-RM 141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141	
Sample Date:		1/6/07		3/8/07		4/20/07		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		0.45 J J+	0.071 J J+	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3 J+	< 0.20 J+	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 141 (continued)																Room 142											
Sample ID:		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		RM142		150 GLEN-ROOM 142		150 GLEN-RM 142		150GLEN-ROOM 142		150 GLEN-ROOM 142		150 GLEN-RM 142		150GLEN-RM142	
Sample Date:		4/21/08		8/18/08		11/24/08		3/2/09		8/27/09		2/19/10		11/11/10		3/17/11		1/2/07		1/6/07		2/7/07		3/8/07		4/20/07		5/17/07		7/30/07	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.69 J	0.11 J	0.60 J	0.096 J	0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	< 1.3	< 0.20	0.52 J J+	0.083 J J+	0.82 J	0.13 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.63 J	0.10 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	1.4	0.35	1.2 J+	0.29 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	1.0	0.25
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	0.87	0.22	2.5 J+	0.63 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	28	4.1	45 J+	6.6 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	0.33 J J+	0.061 J J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	0.62 J	0.092 J	0.62 J	0.092 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	3.7	0.69	5.4 J+	1 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 142 (cont)																											
Sample ID:		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142	
Sample Date:		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08		4/21/08		8/18/08		11/24/08		3/2/09		8/27/09		11/11/09	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																												
Volatile Organic Compounds (VOCs)	TO-15																												
Carbon tetrachloride		0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 142 (continued)								Room 144				Room 145		Room 146													
Sample ID:		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150 GLEN-ROOM 144		150 GLEN-ROOM 144 (Alpha duplicate)		150 GLEN-ROOM 145		150 GLEN-ROOM 146A		150 GLEN-ROOM 146B		150 GLEN-ROOM 146B (FD-Room 146)		RM146		150 GLEN-ROOM 146		150 GLEN-RM 146		150GLEN-ROOM 146		150 GLEN-ROOM 146	
Sample Date:		2/19/10		11/11/10		3/17/11		5/23/15		1/13/07		1/13/07		1/6/07		12/27/06		12/28/06		12/28/06		1/2/07		1/6/07		2/7/07		3/8/07		4/20/07	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																														
Volatile Organic Compounds (VOCs)	TO-15																														
Carbon tetrachloride		< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	0.88 J	0.14 J	< 3.14	< 0.50	0.45 J J+	0.071 J J+	1.1 J	0.18 J	< 1.3	< 0.20	0.49 J	0.078 J	0.63 J	0.10 J	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 2.02	< 0.50	< 0.81	< 0.20	10	2.5	3.6	0.88	3.3	0.82	0.53 J	0.13 J	0.57 J J+	0.14 J J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 1.98	< 0.50	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 1.98	< 0.50	< 0.79	< 0.20	7.9	2.0	4.0	1.0	3.9	0.99	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 2.02	< 0.50	< 0.79	< 0.20	3.3	0.83	1.3	0.33	1.2	0.31	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 2.0	< 0.50	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	4.1	0.61	4.36	0.643	< 1.4	< 0.20	186	27.5	83.4	12.3	85.4	12.6	11	1.6	26 J+	3.8 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20	< 2.72	< 0.50	< 1.1	< 0.20	2.1	0.38	0.82 J	0.15 J	0.71 J	0.13 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	1.3	0.24	< 2.68	< 0.50	< 1.1	< 0.20	37	6.8	10	1.9	11	2.1	1.7	0.32	3.0 J+	0.56 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.
J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 146 (continued)																									
Sample ID:		150 GLEN-RM 146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146	
Sample Date:		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08		4/21/08		8/18/08		11/24/08	
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		< 1.3	< 0.20	0.62 J	0.099 J	0.82 J	0.13 J	< 1.3	< 0.20	0.58 J	0.092 J	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.62 J	0.098 J	< 1.3	< 0.20	0.75 J	0.12 J	0.60 J	0.096 J	0.63 J	0.10 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	0.49 J	0.12 J	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4 +	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Sample Location:		Room 146 (continued)														Outside of School by Room 126 Window						Outside of School by Day Care Window					
Sample ID:		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150 GLEN-0-1A		150 GLEN-0-1B		150 GLEN-0-1A		150 GLEN-0-2A		150 GLEN-0-2B		150 GLEN-0-2A	
Sample Date:		3/2/09		8/27/09		11/11/09		2/19/10		11/11/10		3/17/11		5/23/15		12/27/06		12/28/06		1/6/07		12/27/06		12/28/06		1/6/07	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																										
Volatile Organic Compounds (VOCs)	TO-15																										
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	< 1.3	< 0.20	< 1.3	< 0.20	0.52 J J+	0.083 J J+	1.1 J	0.17 J	< 1.3	< 0.20	0.52 J J+	0.082 J J+
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	0.93 J	0.17 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

	Sample Location:	Downwind on Roof																					
	Sample ID:	150 GLEN-ROOF B		150 GLEN-ROOF B		150GLEN-ROOF		150 GLEN-ROOF		150 GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF	
	Sample Date:	2/8/07		2/8/07		3/8/07		4/20/07		5/17/07		8/9/07		9/10/07		10/14/07		11/14/07		12/17/07		1/21/08		2/19/08	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**																								
Volatile Organic Compounds (VOCs)	TO-15																								
Carbon tetrachloride		< 1.3	< 1.3	< 0.20	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.81	< 0.20	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.81	< 0.20	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.79	< 0.20	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.79	< 0.20	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 1.4	< 0.20	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 1.4	< 0.20	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.2	< 1.2	< 0.21	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21
Trichloroethylene (TCE)		< 1.1	< 1.1	< 0.20	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

	Sample Location:	Downwind on Roof (cont)											
	Sample ID:	150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF	
	Sample Date:	3/17/08		4/21/08		8/18/08		11/24/08		8/27/09		11/11/09	
	Units:	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	**Method**												
Volatile Organic Compounds (VOCs)	TO-15												
Carbon tetrachloride		< 1.3	< 0.20	0.69 J	0.11 J	0.63 J	0.10 J	0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. FD = Field Duplicate.
6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.

7 NT = Not Tested.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

J+ The reported result is estimated.

Table 6-1. Exposure Pathway Mitigation Measure (EPMM) Status
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Property Address	EPMM Design Option	Date Completed or Last Modified	Date of Last Indoor Air Monitoring	Construction Details												
				Ventilation Fan(s) (Model No.)[a]	Number of Sub-Slab Vapor Extraction Points (SSDS)	Sub-slab Vapor Barrier - HDPE Liner	Sub-Slab Ventilation System - Geocomposite	Sub-Slab Vapor Trench	Foundation Wall Ventilation System - Geocomposite	New Basement Slab Installed	Crawlspace Vapor Barrier	Epoxy Vapor Barrier - Floor	Epoxy Vapor Barrier - Foundation Walls	Telemetry Installed (if necessary)	Reason Telemetry not Installed (if applicable)	AUL Recorded (Yes/No)
91-93 Franklin Street	3	March, 2009	3/1/2012	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
95 Franklin Street	2/1[b]	May, 2011	5/16/2013	GP-501	-	-	-	Yes	-	-	Yes	Yes	Yes	Yes	-	No
95R Franklin Street	2	December, 2007	3/8/2010	-	-	-	-	Yes	Yes	-	Yes	Yes	Yes	-	-	Yes
150 Glen Street	1	April, 2015	5/23/2015	GP-501 (3)	18	-	-	-	-	-	-	-	-	Yes	-	No
163 Glen Street	2[c]	July, 2018	8/18/2020	-	-	Yes	-	Yes	-	Yes	-	-	-	-	-	No
166-168 Glen Street	3	November, 2010	3/1/2012	-	-	Yes	Yes	-	-	Yes	Yes	Yes	Yes	-	-	Yes
9 Knowlton Street	1	January, 2010	3/23/2023	GP-501	5	-	-	-	-	-	-	-	-	No	Refused access	Yes
13 Knowlton Street	1	January, 2010	1/10/2023	GP-501	4	-	-	-	-	-	-	-	-	Yes	-	Yes
17 Knowlton Street	3	March, 2009	3/7/2012	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
31-33 Knowlton Street	1	February, 2008	3/19/2010	HS-5000	7	-	-	-	-	-	-	-	-	Yes	-	No
32 Knowlton Street	3	May, 2009	3/8/2011	-	-	-	-	-	-	-	-	-	-	-	-	Yes
34 Knowlton Street	3	June, 2014	4/27/2015	-	-	Yes	-	-	-	Yes	-	-	-	-	-	Yes
35-37 Knowlton Street	3/1[b]	April, 2010	3/11/2011	GP-501	-	Yes	Yes	-	-	Yes	-	Yes	Yes	Yes	-	No
4 Morton Street	3	November, 2008	3/20/2012	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	No
10 Morton Street	3	March, 2009	3/5/2011	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
11 Morton Street	2	November, 2008	5/26/2021	-	-	-	-	Yes	Yes	-	-	Yes	Yes	-	-	Yes
12 Morton Street	3	March, 2008	11/19/2010	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
13 Morton Street	1	October, 2008	9/17/2014	GP-501	5	-	-	-	-	-	-	-	-	Yes	-	No
18 Morton Street	1	July, 2007	2/24/2011	GP-501	5	-	-	-	-	-	-	-	-	Yes	-	No
19-19A Morton Street	3	August, 2009	3/1/2012	-	-	-	-	-	-	-	-	-	-	-	-	Yes
23 Tufts Street	1	May, 2007	2/25/2010	GP-501	1	-	-	-	-	-	-	-	-	Yes	-	No
27 Tufts Street	3/1[b]	May, 2011	5/23/2013	GP-501	-	Yes	Yes	-	-	Yes	Yes	Yes	Yes	Yes	-	No
31 Tufts Street	3	October, 2022	10/17/2023	-	-	Yes	Yes	-	-	Yes	-	-	-	-	-	No
50 Tufts Street	1	August, 2007	3/11/2015	Regenerative Blower	22	-	-	-	-	-	-	Yes	-	Yes	-	No
60 Tufts Street	1	April, 2009	4/25/2019	Regenerative Blower	14	-	-	-	-	-	-	-	-	Yes	-	No

General Notes:
1. NS = Not sampled.
2. - = Not Applicable.

Footnotes:
(a) Ventilation fans manufactured by Radon Away.
(b) An Option 2 or 3 EPMM was initially installed at these properties; however, a fan was added to the EPMM to improve performance. Therefore, these EPMMs consist of Option 1 with Option 2 or 3 EPMM elements.
(c) EPMM demonstrated to be no longer required based on testing requirements in the MassDEP Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure, Policy #WSC-16-435 (Section 3.7 and Tables 3-1 and 3-2).

Table 6-2. Indoor Air Sampling and EPMM Monitoring - June 16, 2023 through December 15, 2023
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
Residential and Commercial Properties
Somerville, Massachusetts

Property	Property Type	Indoor Air Sampling	EPMM Inspection
91-93 Franklin Street	Residential	Not Sampled	10/27/23
95 Franklin Street	Residential	Not Sampled	NA
95R Franklin Street	Residential	Not Sampled	NA
166-168 Glen Street	Residential	Not Sampled	10/24/23
9 Knowlton Street	Residential	Not Sampled	10/25/23
13 Knowlton Street	Residential	Not Sampled	10/30/23
17 Knowlton Street	Residential	Not Sampled	11/22/23
32 Knowlton Street	Residential	Not Sampled	10/24/23
34 Knowlton Street	Residential	Not Sampled	10/23/23
31-33 Knowlton Street	Residential	Not Sampled	NA
35-37 Knowlton Street	Residential	Not Sampled	NA
4 Morton Street	Residential	Not Sampled	NA
10 Morton Street	Residential	Not Sampled	NA
11 Morton Street	Residential	Not Sampled	10/26/2023
12 Morton Street	Residential	Not Sampled	NA
13 Morton Street	Residential	Not Sampled	10/24/2023
18 Morton Street	Residential	Not Sampled	10/24/2023
19-19A Morton Street	Residential	Not Sampled	NA
23 Tufts Street	Residential	Not Sampled	10/20/2023
27 Tufts Street	Residential	Not Sampled	10/31/2023
31 Tufts Street	Residential	10/17/2023	NA

General Notes:

1. EPMM = Exposure Pathway Mitigation Measure.
2. See Appendix E for Air Sampling Checklists and Appendix G for EPMM forms.
3. See Section 6 for a description of EPMM Inspection activities. 60 Tufts Street EPMM is inspected quarterly; see Section 7.
4. NA = No inspection was performed during this reporting period.
5 SSDS = Sub-slab depressurization system.

Table 7-1. Summary of SSDS Monitoring Events - 60 Tufts Street
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
7/28/2023	1	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.	No
10/12/2023	2	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.	No

General Notes:

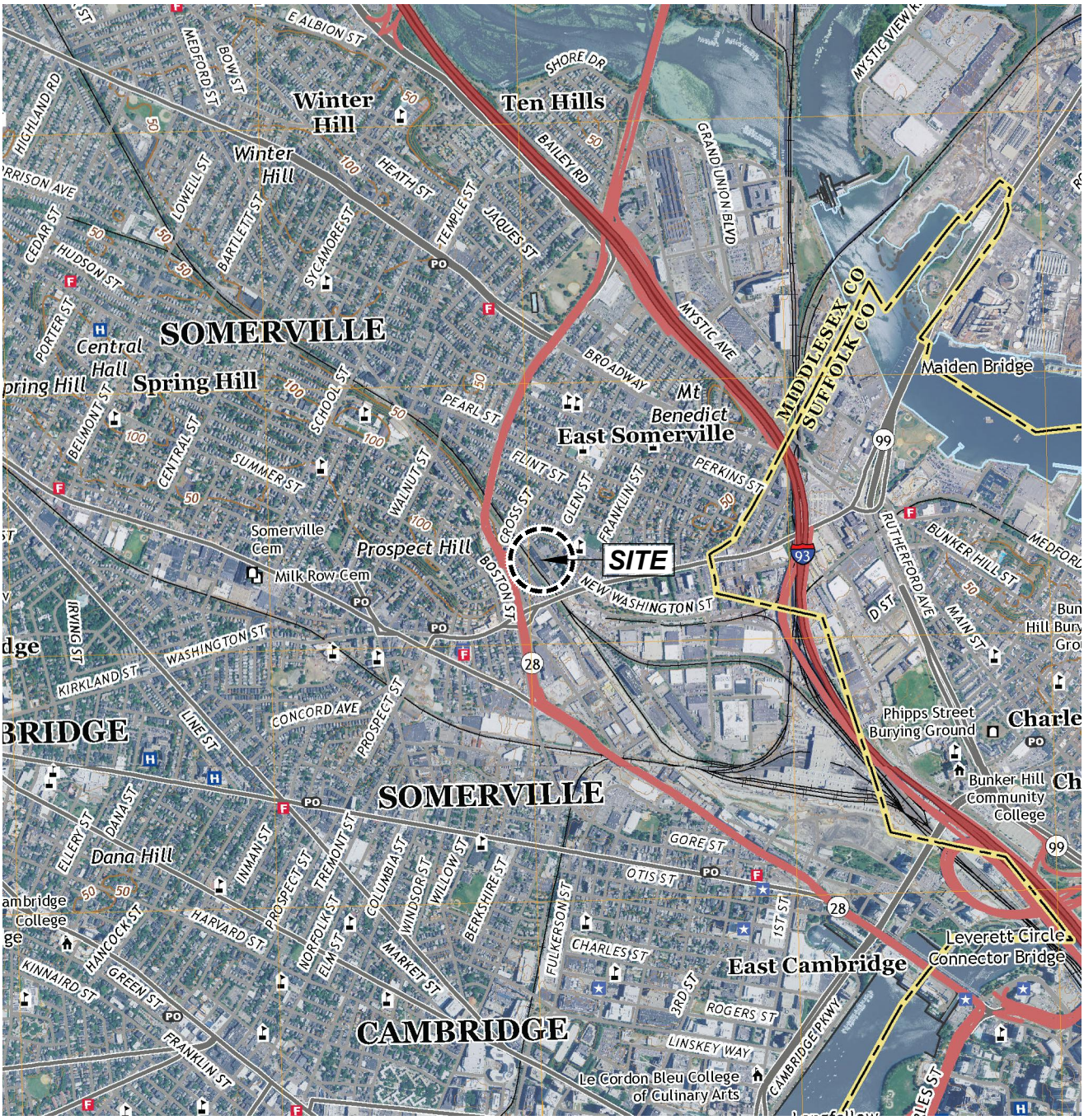
1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VOC measurements collected with a ppm-RAE calibrated to 100 ppm isobutylene gas.
5. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 8-1. Summary of SSDS Monitoring Events - 50 Tufts Street
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
7/28/2023	2	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks. -System flow rate.	No
8/17/2023	3	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
9/15/2023	4	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
10/12/2023	5	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks. -System flow rate.	No
11/22/2023	6	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
12/23/2023	7	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No

General Notes:
1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VFD = Variable Flow Drive.
5. SVT/SVE = Soil Vapor Temporary Point/Soil Vapor Extraction.
6. VOC measurements collected with a ppm-RAE calibrated to 100 parts per million (ppm) with 10.6V lamp.
7. Pressure readings collected using a Dwyer 475-000-FM manometer.

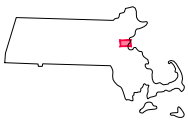
Figures



0 1000 2000 4000 6000

SCALE, FEET

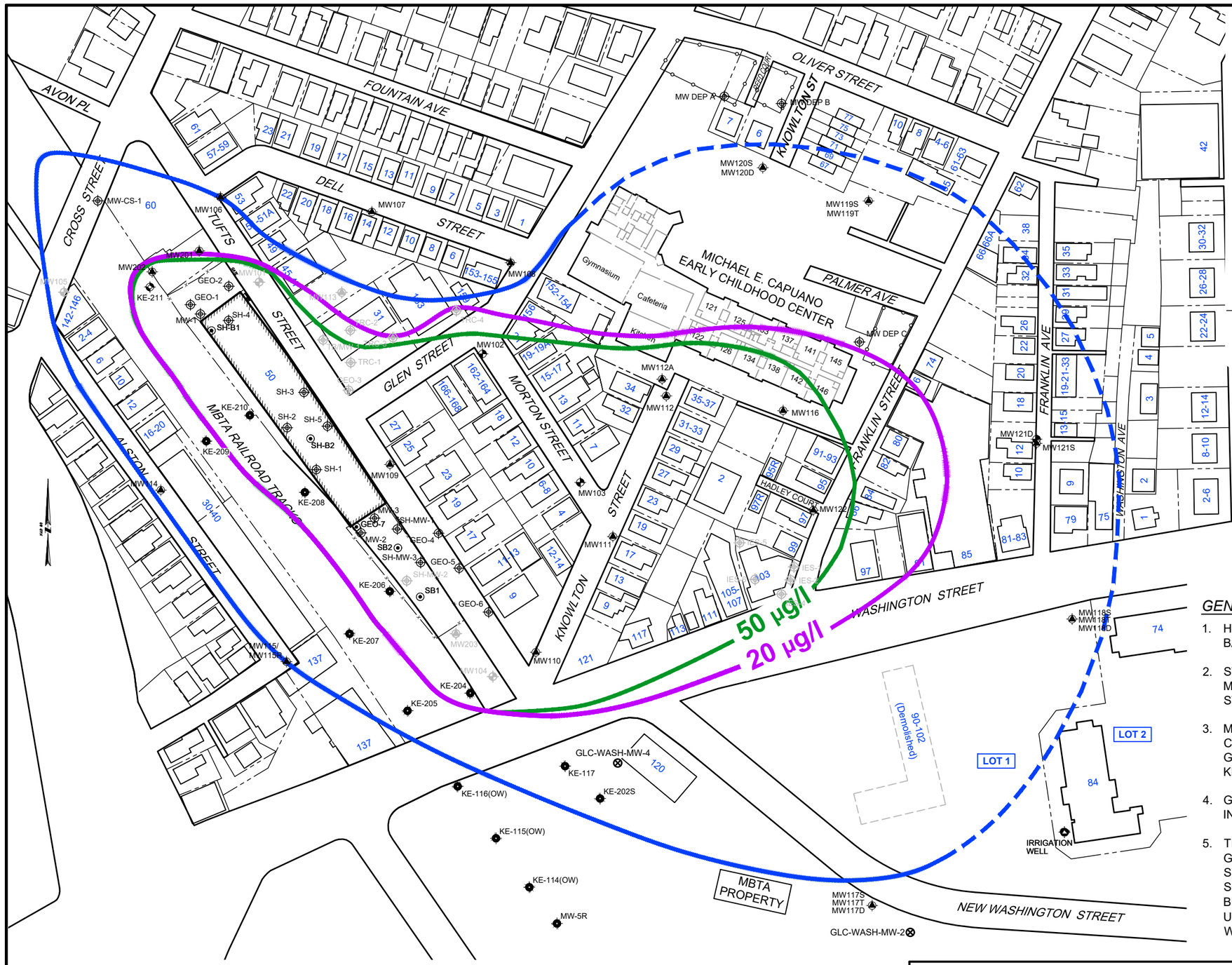
This Image is from U.S.G.S. Topographic 7.5 Minute Series
Boston North, MA Quadrangle, 2018.
Datum is North American Vertical Datum of 1988 (NAVD88).
Contour Interval is 10 Feet.



MASSACHUSETTS
QUADRANGLE LOCATION

Phase V Status Report No. 25 and Remedial Monitoring Report No. 40 50 Tufts Street Somerville, Massachusetts	GEI Consultants	SITE LOCATION MAP
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	February 2024 Fig. 1

B:\Private\04516\#Drafting\04516-3\Phase V SRs & RMRs\045163 Ph V SR Fig 1-1 slm



LEGEND:

- MONITORING WELL INSTALLED BY TRC, 2014
- BORING BY KLEINFELDER, MARCH 2014 AND APRIL 2014
- MONITORING WELL BY KLEINFELDER, SEPTEMBER 2012, MARCH 2014, AND APRIL 2014
- MONITORING WELL WITH SOIL VAPOR SAMPLE PORT INSTALLED BY GEI, JANUARY 2007 - JANUARY 2008
- MONITORING WELL INSTALLED BY GEI, MAY 2006
- PREVIOUSLY INSTALLED IRRIGATION WELL
- GLXC WELL INSTALLED AUGUST 2020
- WELLS IN GRAY HAVE BEEN DESTROYED OR DECOMMISSIONED
- CHAIN LINK FENCE
- 138 ROOM NUMBER AT CAPUANO SCHOOL
- BOUNDARY OF COMMUNITY GARDENS
- 84 STREET ADDRESS
- MBTA = MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
- DISPOSAL SITE BOUNDARY (DASHED WHERE INFERRED)
- EXTENT OF PCE CONCENTRATION IN SHALLOW GROUNDWATER GREATER THAN OR EQUAL TO 20 µg/l
- EXTENT OF PCE CONCENTRATION IN SHALLOW GROUNDWATER GREATER THAN OR EQUAL TO 50 µg/l
- µg/l = MICROGRAMS PER LITER

GENERAL NOTES:

1. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
2. STREET AND PROPERTY LINES BASED ON SOMERVILLE ASSESSORS' MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
3. MONITORING WELL LOCATIONS AND ELEVATIONS, AND CAPUANO CENTER COMMUNITY GARDEN LOCATIONS WERE ESTABLISHED BY ON THE GROUND SURVEYS BY BSC GROUP, INC. OR INFORMATION PROVIDED BY KLEINFELDER.
4. GEI OBSERVED DECOMMISSIONING OF SH-MW1 AND SH-1 THROUGH SH-5 IN 2007.
5. THE 20 µg/l AND 50 µg/l BOUNDARY LINES ARE BASED ON SHALLOW GROUNDWATER ANALYTICAL RESULTS (0 TO 15 FEET BELOW GROUND SURFACE) COLLECTED THROUGH NOVEMBER 2022. KE-204 IS A WELL SCREENED GREATER THAN 15 FEET BELOW GROUND SURFACE, BUT HAS BEEN INCLUDED IN THE 20 µg/l AND 50 µg/l BOUNDARY LINES BECAUSE OF UNCERTAINTY ON THE SHALLOW GROUNDWATER CONCENTRATIONS WITHIN THE IMMEDIATE VICINITY OF THIS WELL.

0 150 300

SCALE, FEET

Phase V Status Report No. 25 and
Remedial Monitoring Report No. 40
50 Tufts Street Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

DISPOSAL SITE MAP AND SITE BOUNDARY

Project 04516-3 | February 2024 | Fig. 1-2

B:\Private\04516\#Drafting\04516-3\Phase V SRs & RMRs\045163 PhV SR DSB

0 95 190 380

SCALE: 1" = 120'

LEGEND

PCE CONCENTRATIONS

- Not Detected
- Less than RCS-1
- 0.65 Greater than RCS-1 (1 mg/kg) (Detected concentration presented in mg/kg)

DISPOSAL SITE BOUNDARY

NOTES

1. Historic soil characterization samples reportedly collected between 2010 and 2014 by Vanasse Hangen Brustlin, Inc., Nobis Group, and Kleinfelder, Inc. Source: Green Line Extension Project Release Abatement Measure (RAM) Plan Historic Fill and Soil Impacted by Railroad Operations - Special Project Designation, dated February 2015 (Kleinfelder).

2. More recent soil characterization samples collected between 2018 and 2020 by TRC Companies, Inc.

Phase V Status Report No. 25 and
Remedial Monitoring Report No. 40
50 Tufts Street Somerville, Massachusetts

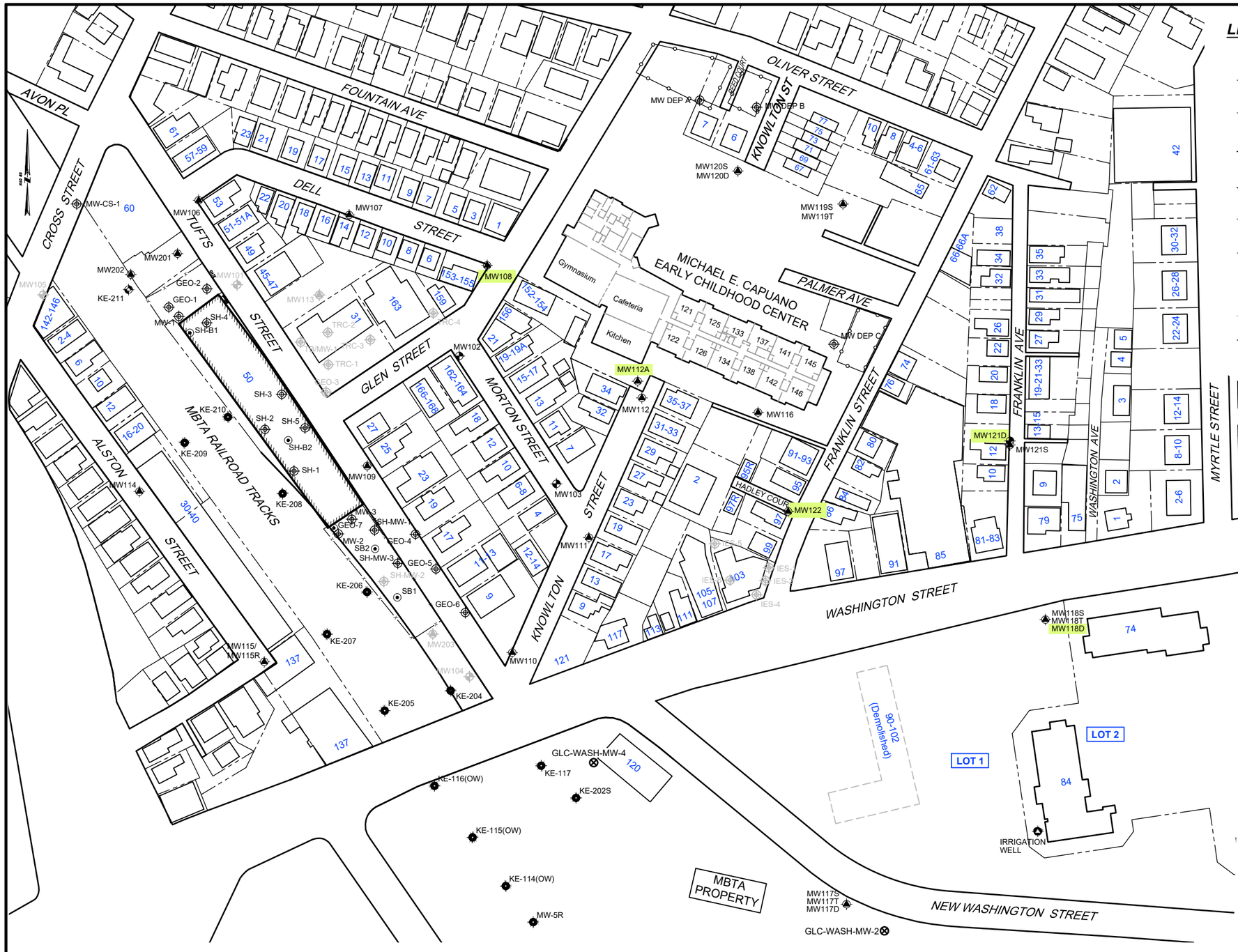
UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

KLEINFELDER SOIL DATA AND GLX PROJECT PRE-CHARACTERIZATION SAMPLES

Project 04516-3 February 2024 Fig. 2-1

B:\Private\04516\20.0 GIS Data\Map_Files\SR 24 RMR 39\Fig 2-1_GLX Project Pre-Characterization.mxd



LEGEND:

- MONITORING WELL INSTALLED BY TRC, 2014
- BORING BY KLEINFELDER, MARCH 2014 AND APRIL 2014
- MONITORING WELL BY KLEINFELDER, SEPTEMBER 2012, MARCH 2014, AND APRIL 2014
- MONITORING WELL WITH SOIL VAPOR SAMPLE PORT INSTALLED BY GEI, JANUARY 2007 - JANUARY 2008
- MONITORING WELL INSTALLED BY GEI, MAY 2006
- MONITORING WELL INSTALLED BY OTHERS
- PREVIOUSLY INSTALLED IRRIGATION WELL
- GLXC WELL INSTALLED AUGUST 2020
- WELLS IN GRAY HAVE BEEN DESTROYED OR DECOMMISSIONED
- CHAIN LINK FENCE
- 138 ROOM NUMBER AT CAPUANO SCHOOL
- BOUNDARY OF COMMUNITY GARDENS
- 84 STREET ADDRESS
- MBTA = MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
- MONITORING WELL SAMPLED BY GEI DURING THIS REPORTING PERIOD

GENERAL NOTES:

1. MONITORING WELL LOCATIONS AND ELEVATIONS, AND CAPUANO CENTER COMMUNITY GARDEN LOCATIONS WERE ESTABLISHED BY ON THE GROUND SURVEYS BY BSC GROUP, INC.
2. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
3. VERTICAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
4. STREET PROPERTY LINES, AND BUILDINGS ARE BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
5. GEI OBSERVED ABANDONMENT OF SH-MW1 AND SH-1 THROUGH SH-5 IN 2007.

Phase V Status Report No. 25 and
Remedial Monitoring Report No. 40
50 Tufts Street Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

MONITORING WELL LOCATIONS

Project 04516-3 | February 2024 | Fig. 4-1

B:\Private\04516\#Drafting\04516-3\Phase V SRs & RMRs\045163 PhV SR MW Loc

Phase V Status Report No. 25 and Remedial Monitoring Report No. 40 50 Tufts Street, Somerville, Massachusetts	GEI Consultants	SUB-SLAB SOIL VAPOR AND INDOOR AIR SAMPLING
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	February 2024 Fig. 4-2

B:\Private\04516\20.0 GIS Data\Map_Files\SR 24 RMR 39\Fig 4-2 IA and SV sampling.mxd

Notes:
1. EPMMs demonstrated to be no longer required based on testing requirements in the MassDEP Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure, Policy #WSC-16-435 (Section 3.7 and Tables 3-1 and 3-2).

0 45 90 180
SCALE, FEET

Phase V Status Report No. 25 and
Remedial Monitoring Report No. 40
50 Tufts Street, Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

EPMM INSTALLATION PROGRESS

Project 04516-3 | February 2024 | Fig. 6-1

B:\Private\04516\20.0 GIS Data\Map_Files\SR 24 RMR 39\Fig 6-1_EPMM Installation Progress.mxd

Preferred Criteria For:

Option 1 (SSDS):

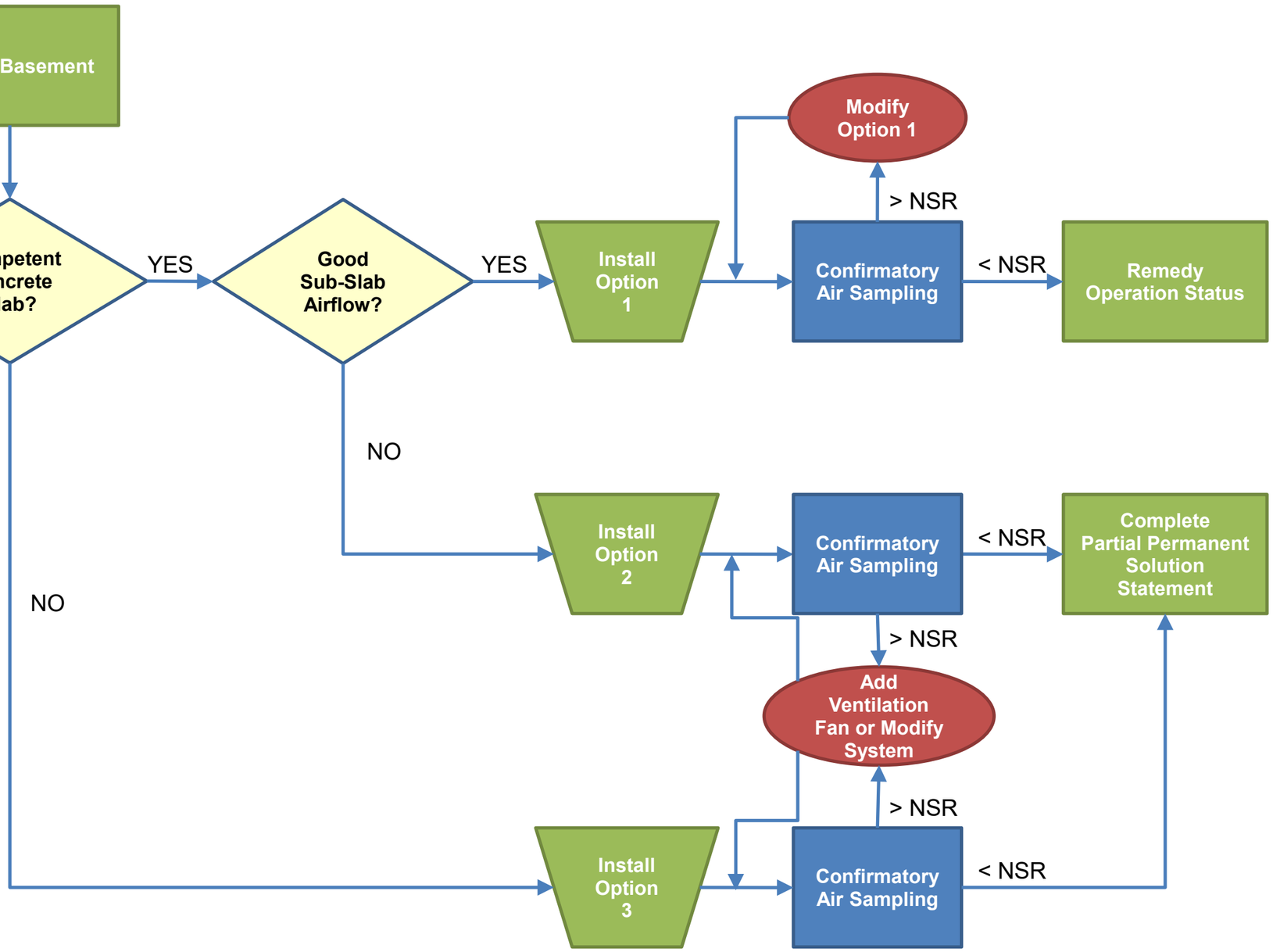
1. Competent concrete slab
2. Poured concrete foundation
3. Granular sub-grade (good sub-slab air flow)

Option 2 (Vapor Trench):

1. Competent concrete slab
2. Silt/clay sub-grade (poor sub-slab air flow)

Option 3 (New Slab Installation):

1. Incompetent concrete slab
2. Silt/clay sub-grade (poor sub-slab air flow)



NSR = No Significant Risk

Phase V Status Report No. 25 and Remedial Monitoring Report No. 40 50 Tufts Street, Somerville, Massachusetts	GEI Consultants	EPMM MITIGATION FLOW CHART
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	February 2024 Fig. 6-2

LEGEND:

PERMANENT SOLUTION STATUS

- PERMANENT SOLUTION WITH CONDITIONS PARTIAL STATEMENT SUBMITTED
- PERMANENT SOLUTION WITHOUT CONDITIONS PARTIAL STATEMENT SUBMITTED
- REMEDY OPERATION STATUS
- DISPOSAL SITE BOUNDARY (DASHED WHERE INFERRED)

0 85 170 340

SCALE, FEET

Phase V Status Report No. 25 and
Remedial Monitoring Report No. 40
50 Tufts Street, Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

PERMANENT SOLUTION STATUS

Project 04516-3 | February 2024 | Fig. 6-3

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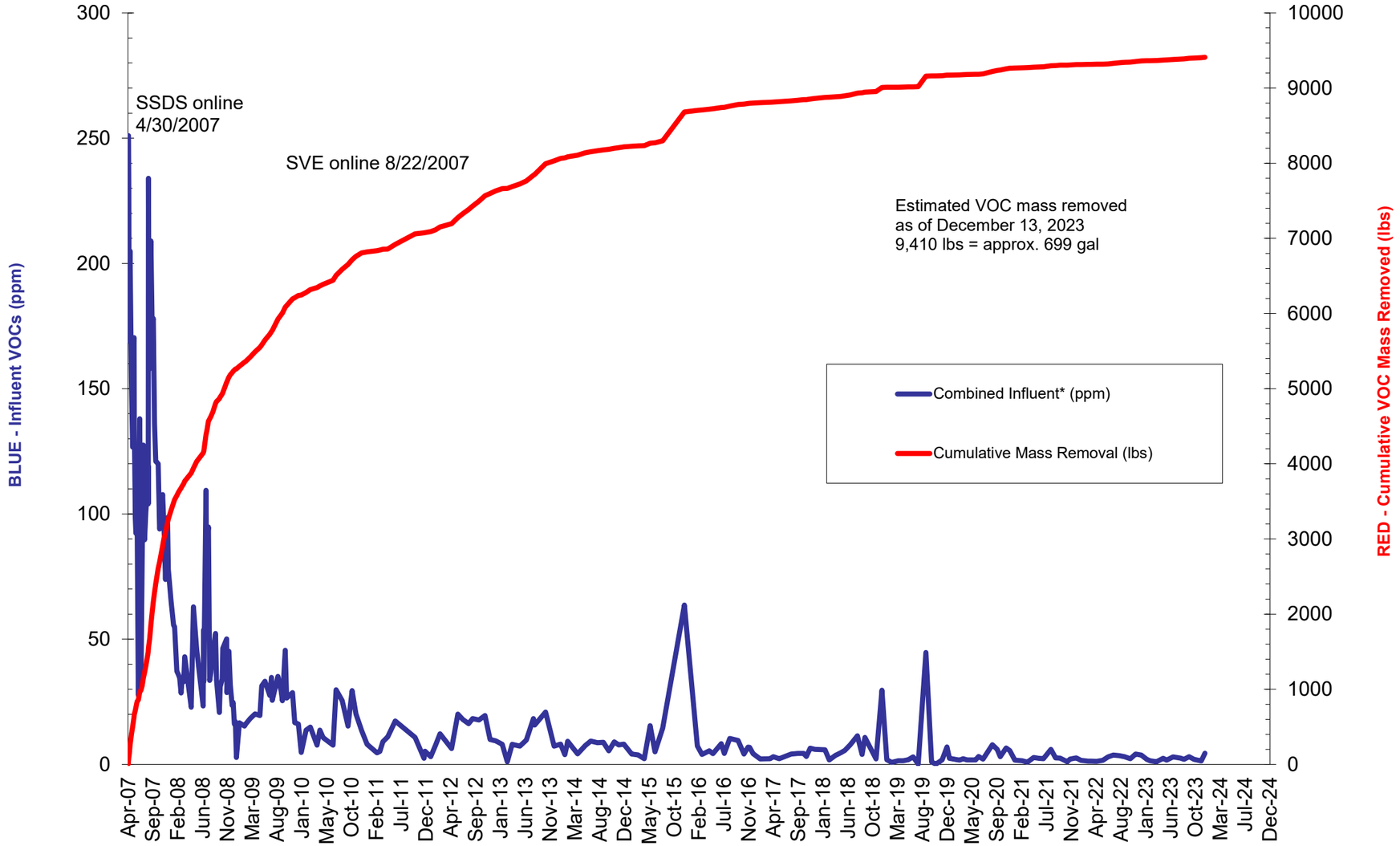

General Notes:

lbs = pounds.

PCE = tetrachloroethylene (perchloroethylene).

ppm = parts per million.

SSDS = sub-slab depressurization system.

SVE = soil vapor extraction system.

VOC = volatile organic compound.

*Influent concentrations measured by a photoionization detector (PID).

Phase V Status Report No. 25 and Remedial Monitoring Report No. 40 50 Tufts Street, Somerville, Massachusetts	GEI Consultants	COMBINED INFLUENT VOC CONCENTRATIONS AND CUMULATIVE VOC REMOVAL
UniFirst Corporation Wilmington, Massachusetts	Project 04516-3	February 2024 Fig. 8-1

Appendix A

MassDEP Transmittal Forms BWSC-108, BWSC-108A, BWSC-108B

Comprehensive Response Action Transmittal Forms:

- **BWSC-108A 1 of 5 (50 Tufts SSDS)**
- **BWSC-108B 1 of 5 (50 Tufts SSDS)**
- **BWSC-108A 2 of 5 (50 Tufts SVE)**
- **BWSC-108B 2 of 5 (50 Tufts SVE)**
- **BWSC-108A 3 of 5 (Capuano Center)**
- **BWSC-108B 3 of 5 (Capuano Center)**
- **BWSC-108A 4 of 5 (Residences)**
- **BWSC-108A 5 of 5 (MNA)**

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

Release Tracking Number
3 - 23246

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: 50 TUFTS ST & PROP ACROSS THE ST

2. Street Address: 50 TUFTS ST

3. City/Town: SOMERVILLE 4. ZIP Code: 021454129

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☐ a. Tier I ☐ b. Tier ID ☑ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

☐ 4. Submit [illegible] **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR [illegible].

☐ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

DRAFT COPY

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☑ 16. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☑ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☑ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs: 5

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☑ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative: _____

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

DRAFT COPY

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report,*** *a* ***Remedy Operation Status,*** *a* ***Phase IV, Phase V or Temporary Solution Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

DRAFT COPY

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 9719
2. First Name: ILEEN S
3. Last Name: GLADSTONE
4. Telephone: 7817214012
5. Ext.:
6. Email: igladstone@geiconsultants.com
7. Signature:
8. Date: (mm/dd/yyyy)
9. LSP Stamp:

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☑ c. change in the person undertaking response actions

2. Name of Organization: UNIFIRST CORPORATION

3. Contact First Name: CATHERINE 4. Last Name: MALAGRIDA

5. Street: 68 JONSPIN ROAD 6. Title: ENVIRONMENTAL COMPLIANCE MANAGER

7. City/Town: WILMINGTON 8. State: MA 9. ZIP Code: 018870000

10. Telephone: 9786588888 11. Ext: 0587 12. Email: CATHERINE_MALAGRIDA@UNIFIRST.COM

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS: ☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: OTHER PRPS

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

DRAFT COPY

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☑ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☑ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☑ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☑ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: _____ (Signature) 3. Title: ENVIRONMENTAL COMPLIANCE MANAGER

4. For: UNIFIRST CORPORATION (Name of person or entity recorded in Section D) 5. Date: _____ (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext. _____ 13. Email: _____

DRAFT COPY

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☑ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☑ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☐ ii. Natural Attenuation
- ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☑ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

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B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/1/2023 (mm/dd/yyyy) To: 12/15/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)
- ☐ a. System Startup: (if applicable)
  - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
  - ☐ ii. Other Describe:
- ☑ b. Post-system Startup (after first month) or Monitoring Program:
  - ☐ i. Monthly
  - ☐ ii. Quarterly
  - ☐ iii. Annually
  - ☑ iv. Other Describe: OPERATIONAL PARAMETERS QUARTERLY, OFF-GAS MONTHLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): 480 f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

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E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

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☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 5

BWSC108 -B

Release Tracking Number
3 23246

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.
For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one) ☑ Discharge ☐ GroundWater Concentration ☐ Pressure Differential	Check here, if ND/BDL	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
SSDS	07/28/2023	TOTAL VOCS	2.5		0.0	☑	0.125	PPMV	YES
SSDS	08/17/2023	TOTAL VOCS	2.0		0.0	☑	0.1	PPMV	YES
SSDS	09/15/2023	TOTAL VOCS	3.1		0.0	☑	0.155	PPMV	YES
SSDS	10/12/2023	TOTAL VOCS	2.0		0.0	☑	0.1	PPMV	YES
SSDS	11/22/2023	TOTAL VOCS	1.4		0.0	☑	0.07	PPMV	YES
SSDS	12/13/2023	TOTAL VOCS	4.5		0.0	☑	0.225	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☑ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☑ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☐ ii. Natural Attenuation
- ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☑ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

DRAFT COPY

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/1/2023 (mm/dd/yyyy) To: 12/15/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)
- ☐ a. System Startup: (if applicable)
  - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
  - ☐ ii. Other Describe:
- ☑ b. Post-system Startup (after first month) or Monitoring Program:
  - ☐ i. Monthly
  - ☐ ii. Quarterly
  - ☐ iii. Annually
  - ☑ iv. Other Describe: OPERATIONAL PARAMETERS QUARTERLY, OFF-GAS MONTHLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required
☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 480 f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.
☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

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E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

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☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 5

BWSC108 -B

Release Tracking Number
3 23246

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.
For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one) ☑ Discharge ☐ GroundWater Concentration ☐ Pressure Differential	Check here, if ND/BDL	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
SSDS	07/28/2023	TOTAL VOCS	2.5		0.0	☑	0.125	PPMV	YES
SSDS	08/17/2023	TOTAL VOCS	2.0		0.0	☑	0.1	PPMV	YES
SSDS	09/15/2023	TOTAL VOCS	3.1		0.0	☑	0.155	PPMV	YES
SSDS	10/12/2023	TOTAL VOCS	2.0		0.0	☑	0.1	PPMV	YES
SSDS	11/22/2023	TOTAL VOCS	1.4		0.0	☑	0.07	PPMV	YES
SSDS	12/13/2023	TOTAL VOCS	4.5		0.0	☑	0.225	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 3 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☑ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☑ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☐ ii. Natural Attenuation
- ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☑ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

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B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/1/2023 (mm/dd/yyyy) To: 12/15/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)
- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
- ☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:
- ☐ i. Monthly
- ☑ ii. Quarterly
- ☐ iii. Annually
- ☐ iv. Other Describe:

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required
☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 82 f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.
☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

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E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

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G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☐ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 3 of: 5

BWSC108 -B

Release Tracking Number
3 23246

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.
For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one) ☑ Discharge ☐ GroundWater Concentration ☐ Pressure Differential	Check here, if ND/BDL	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
SSDS	07/28/2023	TOTAL VOCS	0.2		0.0	☑	8	PPMV	YES
SSDS	10/12/2023	TOTAL VOCS	0.1		0.0	☑	8	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 4 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☑ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☑ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☐ ii. Natural Attenuation
- ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☑ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☑ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

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B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/1/2023 (mm/dd/yyyy) To: 12/15/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)
- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
- ☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:
- ☐ i. Monthly
- ☐ ii. Quarterly
- ☐ iii. Annually
- ☑ iv. Other Describe: 60 TUFTS ST QUARTERLY, OTHER PROPERTIES ANNUALLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☑ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required
☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☑ 1. The Active Remedial System was functional one or more days during the Reporting Period.
a. Days System was Fully Functional: 182 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 153 f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.
☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)
☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

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E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☑ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: 2 b. Total Number of Days of Unscheduled Shutdowns: 185

c. Reason(s) for Unscheduled Shutdowns: 9 KNOWLTON- 182 DAYS, 60 TUFTS- 3 DAYS SEE ATTACHED

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

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G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

SEE ATTACHED.

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 5 of: 5

BWSC108 -A

Release Tracking Number
3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☑ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☑ ii. Natural Attenuation
- ☐ iii. Other Describe:

2. Mode of Operation: (check one)
☐ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

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B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 6/1/2023 (mm/dd/yyyy) To: 12/15/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)
- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
- ☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:
- ☐ i. Monthly
- ☐ ii. Quarterly
- ☑ iii. Annually
- ☐ iv. Other Describe:

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

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E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

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☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☑ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Additional supporting information for:

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

BWSC-108, Section B, Question 15 and 18: Submit a **Phase V Status Report and Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).

The Phase V Status Report and Status Report to maintain ROS has been submitted via eDEP, Transmittal No. 1655442, as “Phase V Status Report No. 25 and Remedial Monitoring Report No. 40,” RTN 3-23246, 50 Tufts Street, Somerville, Massachusetts, dated January X, 2024.

Additional supporting information for:

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (Subpart H)

BWSC-108A, Remedial System 4 of 5, Section 4, Question 1c: **SHUTDOWNS OF ACTIVE REMEIDAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:** Reason(s) for Unscheduled Shutdowns

The owner of 9 Knowlton Street informed GEI that they do not want to run the fan, the total number of shutdown days during this reporting period was 182.

The system at 60 Tufts Street was shut down for approximately 3 days during this reporting period. GEI restarted the system on October 20, 2023.

Additional supporting information for:

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (Subpart H)

BWSC-108A, Remedial System 5 of 5, Section G, Question 5: **SUMMARY STATEMENTS:** Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

The Summary Statement for BWSC-108A Remedial System 5 of 5 has been submitted via eDEP, Transmittal No. 1655442 as part of the “Phase V Status Report No. 25 and Remedial Monitoring Report No. 40,” RTN 3-23246, 50 Tufts Street, Somerville, Massachusetts, dated January X, 2024.

Appendix B

Property Owner Notification Letters

Table B-1. Correspondence Tracking
Phase V Status Report No. 25 and Remedial Monitoring Report No. 40
Residential and Commercial Properties
Somerville, Massachusetts

Property	Date	Communication
84 Franklin Street	7/12/2023	Mailed certified Request to Conduct Environmental Sampling letter.
	10/9/2023	Knocked on door of residence on October 9. Spoke with homeowner who indicated that they had received GEI's previous letter summarizing Site environmental history and requesting property access. Homeowner accepted a second letter and provided email address for communication. GEI emailed homeowner in October and December 2023; follow up communication to email address was not successful. Follow up email sent in January 2024, and homeowner responded in the affirmative to schedule a time for access.
95R Franklin Street	10/9/2023	Knocked on door of residence. Spoke with tenant who provided rental management company information.
97 Franklin Street	7/12/2023	Mailed certified Request to Conduct Environmental Sampling letter.
	10/9/2023	Knocked on door, no response and left a copy of previously mailed letter in the mailbox.
17 Knowlton Street	3/13/2023	Mailed Annual EPMM Inspection request letter. No response
	10/9/2023	Knocked on door on October 9, and spoke with owner. Owner provided email address and GEI scheduled EPMM inspection.
31-33 Knowlton Street	7/12/2023	Mailed certified Summary of Indoor Air Sampling and Environmental Conditions letter.
	10/9/2023	Knocked on door and spoke with tenant. Tenant provided landlord's phone number.
35-37 Knowlton Street	7/12/2023	Mailed certified Summary of Indoor Air Sampling and Environmental Conditions letter.
	10/9/2023	Knocked on door, no response and left a copy of previously mailed letter in the mailbox.
4 Morton Street	3/13/2023	Mailed Annual EPMM Inspection request letter. No response
	10/9/2023	Knocked on door, no response and left a copy of previously mailed letter in the mailbox.
11 Morton Street	10/9/2023	Knocked on door on October 9, and spoke with owner. Owner provided cell and email contact information, GEI scheduled EPMM inspection.
12 Morton Street	10/9/2023	Knocked on doors on multiple units on October 9, and no response.
19-19A Morton Street	3/13/2023	Mailed Annual EPMM Inspection request letter. No response
	10/9/2023	Knocked on door of Unit 19 on October 9, and spoke with tenant. Tenant felt uncomfortable providing landlord's information.

General Notes:
1. EPMM = Exposure Pathway Mitigation Measure.

GEI Consultants

Consulting Engineers and Scientists

March 13, 2023
Project 04516-3

Gang Lian and Xiao-Ning Wang
5 Butterwick Lane
Old Lyme, CT 06371

Dear Mr. Lian and Mrs. Wang:

Re: Annual EPMM Inspection
19-19A Morton Street
Somerville, Massachusetts

On behalf of UniFirst Corporation, I am writing to request access to your property at 19-19A Morton Street to perform the annual inspection of the exposure pathway mitigation measure (EPMM) installed in the basement. We previously sent a letter on August 16, 2022.

The EPMM consists of a sub-slab vapor barrier, ventilation piping with extraction points beneath the basement slab, and sealing the basement floor and the below grade portion of the walls. The EPMM was installed to inhibit vapors from intruding through the building foundation. We typically inspect the EPMM annually to confirm that the components are intact and functioning as intended.

Please contact Christopher Coner at 781-721-4135 or cconer@geiconsultants.com, to schedule the annual EPMM inspection of the basement, if you have any questions, or would like additional information.

Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/CC/ISG:jam
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI Consultants

Consulting Engineers and Scientists

March 13, 2023
Project 04516-3

Clementina Cabral
17 Knowlton Street
Somerville, MA 02145

Dear Ms. Cabral:

Re: Annual EPMM Inspection
17 Knowlton Street
Somerville, Massachusetts

On behalf of UniFirst Corporation, I am writing to request access to your property at 17 Knowlton Street to perform the annual inspection of the exposure pathway mitigation measure (EPMM) installed in the basement. We previously sent a letter on August 16, 2022.

The EPMM consists of a sub-slab vapor barrier, ventilation piping with extraction points beneath the basement slab, and sealing the basement floor and the below grade portion of the walls. The EPMM was installed to inhibit vapors from intruding through the building foundation. We typically inspect the EPMM annually to confirm that the components are intact and functioning as intended.

Please contact Christopher Coner at 781-721-4135 or cconer@geiconsultants.com, to schedule the annual EPMM inspection of the basement, if you have any questions, or would like additional information.

Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/CC/ISG:jam
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI Consultants

Consulting Engineers and Scientists

March 13, 2023
Project 04516-3

Marion Morton Realty Trust
Xinjian Qiao, Trustee
46 Gibson Street
Medford, MA 02155-4831

Dear Ms. Qiao:

Re: Annual EPMM Inspection
4 Morton Street
Somerville, Massachusetts

On behalf of UniFirst Corporation, I am writing to request access to your property at 4 Morton Street to perform the annual inspection of the exposure pathway mitigation measure (EPMM) installed in the basement. We previously sent a letter on August 16, 2022.

The EPMM consists of a sub-slab vapor barrier, ventilation piping with extraction points beneath the basement slab, and sealing the basement floor and the below grade portion of the walls. The EPMM was installed to inhibit vapors from intruding through the building foundation. We typically inspect the EPMM annually to confirm that the components are intact and functioning as intended.

Please contact Christopher Coner at 781-721-4135 or cconer@geiconsultants.com, to schedule the annual EPMM inspection of the basement, if you have any questions, or would like additional information.

Our records indicate that your preferred method for scheduling EPMM inspections was by email at qiaox2001@yahoo.com and your home and work numbers were 617-905-5158 and 781-839-1765, respectively. It appears that the home and work phone numbers we have for you are no longer working numbers and we received no response to our email. Please inform me if you have an alternative phone number or email for scheduling future EPMM inspections.

Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/CC/ISG:jam
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI Consultants

Consulting Engineers and Scientists

July 7, 2023
Project 04516-3

CERTIFIED MAIL 9171 9690 0935 0005 3804 25

Shelly Calder
Milton Yarberry
84 Franklin Street, Unit 3
Somerville, MA 02145

Dear Ms. Calder and Mr. Yarberry:

Re: Request to Conduct Environmental Sampling
84-86 Franklin Street, Unit 3
Somerville, Massachusetts

The purpose of this letter is to inform you about the environmental conditions in the vicinity of your property located at 84-86 Franklin Street, Unit 3 in Somerville, Massachusetts and to request access to conduct environmental sampling. The sampling would include sub-slab soil vapor and indoor air testing. Contamination is originating from the property located at 50 Tufts Street.

A release of chlorinated volatile organic compounds (VOCs) to soil and groundwater on the 50 Tufts Street Property was first reported to the Massachusetts Department of Environmental Protection (MassDEP) in 2002. Numerous studies have been conducted relating to the 50 Tufts Street Site, and response actions are currently being conducted under the Massachusetts Contingency Plan (MCP) process. Reports documenting response actions conducted at the Site are available for review at the MassDEP Northeast Regional Office in Woburn, Massachusetts. Records are accessible online at the MassDEP Searchable Sites database (https://eeaonline.eea.state.ma.us/portal#!/search/wastesite). Additionally, local public document repositories have been established at the Somerville Central Public Library and at the City of Somerville Clerk's Office. The MassDEP release tracking number (RTN) for the Site is RTN 3-23246. The 84-86 Franklin Street property is located within the boundaries of the Site (Fig. 1).

The boundaries of the Site were delineated based on the extent of dissolved concentrations of chlorinated VOCs in groundwater. All properties within the Site, including 84-86 Franklin Street, Unit 3, are serviced by municipal water. Therefore, there is limited potential for direct exposure to contamination in groundwater for human receptors within the Site. Because they are volatile, VOCs have the potential to migrate from subsurface soils or groundwater into the indoor air of buildings. This is known as vapor intrusion.

GEI has conducted groundwater sampling throughout the neighborhood, including on Franklin Street and Franklin Avenue, since 2007. Additionally, GEI collected sub-slab soil vapor samples from 86 Franklin Street (now known as 84-86 Franklin Street, Unit 1 and Unit 2) in April 2007. GEI collected indoor air samples from 86 Franklin Street in June 2007, November 2007, and February 2008. The results of the testing indicated that the groundwater contamination had not affected the indoor air of 86 Franklin Street.

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI would like to conduct similar soil vapor and indoor air testing at your property at no expense to you. Please contact me at igladstone@geiconsultants.com or 781-721-4012 to answer any of your questions and to coordinate access.

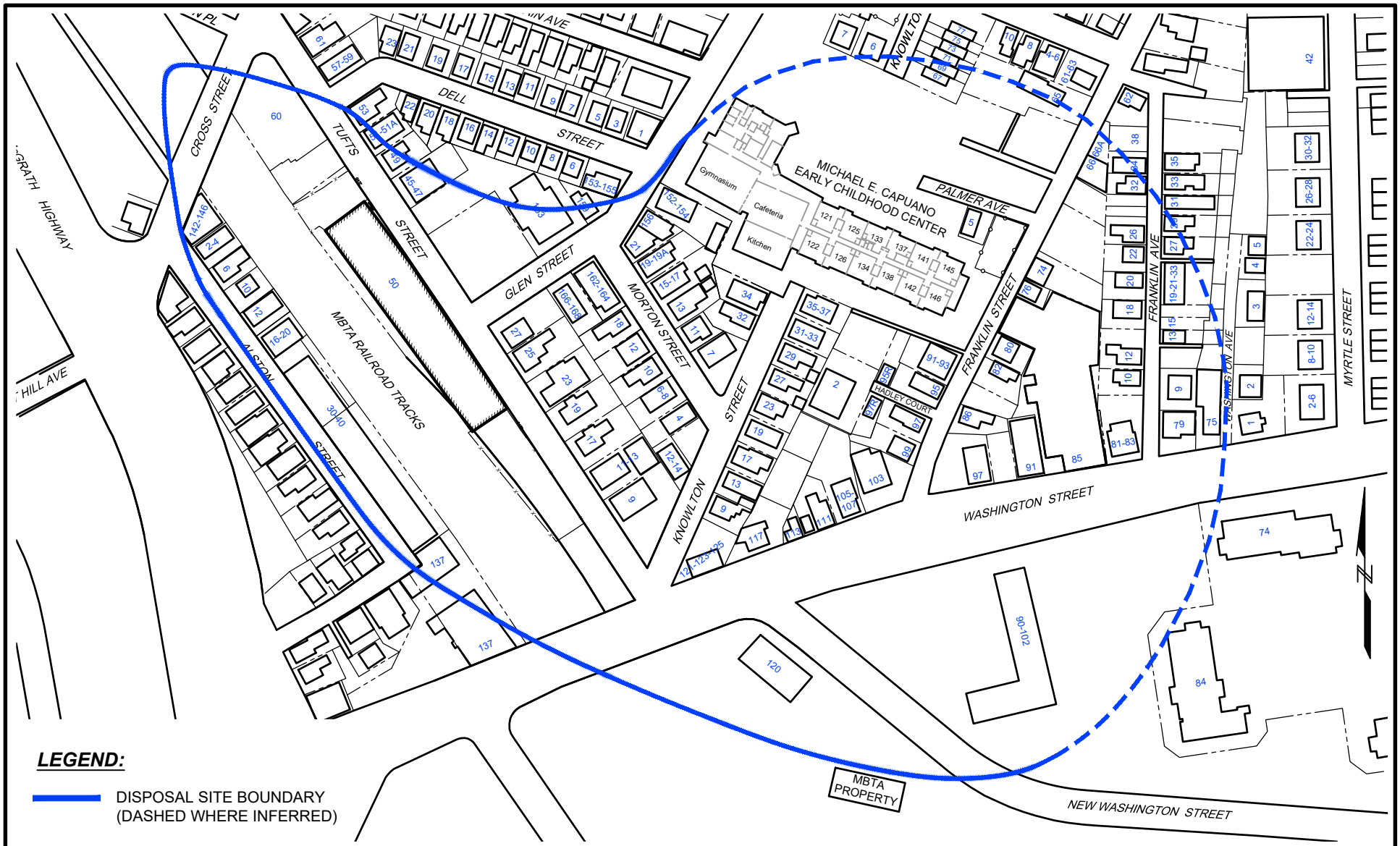
Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/COC:jam
Enclosure
c: Catherine Malagrida, UniFirst Corporation
MassDEP-NERO (via Status Report)



50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE SKETCH

Project 04516-3

June 2023

Fig . 1

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GEI Consultants

Consulting Engineers and Scientists

July 7, 2023
Project 04516-3

CERTIFIED MAIL 9171 9690 0935 0005 3808 95

Mr. Brian Nguyen
Ms. Maithy Nguyen
6 Valyn Lane
Wilmington, MA 01887

Dear Mr. and Ms. Nguyen:

Re: Summary of Indoor Air Sampling and Environmental Conditions
31-33 Knowlton Street
Somerville, Massachusetts

The purpose of this letter is to provide a summary of the environmental conditions at the property located at 31-33 Knowlton Street in Somerville, Massachusetts due to contamination originating from the property at 50 Tufts Street, and to request access to the property for continued monitoring of the sub-slab ventilation system that has previously been installed.

A release of chlorinated volatile organic compounds (VOCs) to soil and groundwater on the 50 Tufts Street property was first reported to the Massachusetts Department of Environmental Protection (MassDEP) in 2002. Numerous studies have been conducted relating to the 50 Tufts Street Site, and response actions are currently being conducted under the Massachusetts Contingency Plan (MCP) process. Reports documenting response actions conducted at the Site are available for review at the MassDEP Northeast Regional Office in Woburn, Massachusetts. Records are accessible online at the MassDEP Searchable Sites database (https://eeaonline.eea.state.ma.us/portal#!/search/wastesite). Additionally, local public document repositories have been established at the Somerville Central Public Library and at the City of Somerville Clerk's Office. The MassDEP release tracking number (RTN) for the Site is RTN 3-23246. The 31-33 Knowlton Street property is located within the boundaries of the Site (Fig. 1).

The boundaries of the Site were delineated based on the extent of dissolved concentrations of chlorinated VOCs in groundwater. All properties within the Site, including 31-33 Knowlton Street, are serviced by municipal water. Therefore, there is limited potential for direct exposure to contamination in groundwater for human receptors within the Site. Because they are volatile, VOCs have the potential to migrate from subsurface soils or groundwater into the indoor air of buildings. This is known as vapor intrusion.

GEI collected sub-slab soil vapor samples in March 2007. Based on the sub-slab soil vapor sample testing results, an Active Exposure Pathway Mitigation Measure (AEPMM) was installed. The AEPMM, similar to a radon system, consists of sub-slab ventilation piping, and an electric-powered fan to capture soil vapor from below the foundation slab and vent the vapors outside above the roofline. GEI inspects and maintains this system and confirms that it continues to operate as designed.

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI performed indoor air testing after installation of the AEPMM in August 2007, November 2007, February 2008, July 2008, January 2009, and March 2010. We performed four additional rounds of sampling in February 2016, November 2016, March 2017, and September 2017. The results of the sampling are in the attached Table 1. The results of the most recent round of sampling in September 2017 were non-detect for VOCs in indoor air except for tetrachloroethylene (PCE) which was detected below the MassDEP Residential Threshold Value (TV) at a concentration 0.136 ug/m^3, which is considered not impacted. The indoor air sampling results demonstrate that there is a condition of "No Significant Risk" to occupants of the building at 31-33 Knowlton Street. No Significant Risk is a standard established in the MCP to demonstrate that exposure to residual contamination will not result in unacceptable risks to human health based on regulatory thresholds established in the MCP. At present, the condition of No Significant Risk is dependent on the continued operation of the AEPMM installed at the property.

GEI will continue to maintain, inspect, and monitor operation of the system as long as it operates. As part of routine maintenance, GEI replaces the battery in the radio node affixed to the exterior of the house and monitors the fan. GEI is requesting access to the exterior of the property to continue this maintenance.

Please contact me at igladstone@geiconsultants.com or 781-721-4012 to answer any of your questions and to coordinate access.

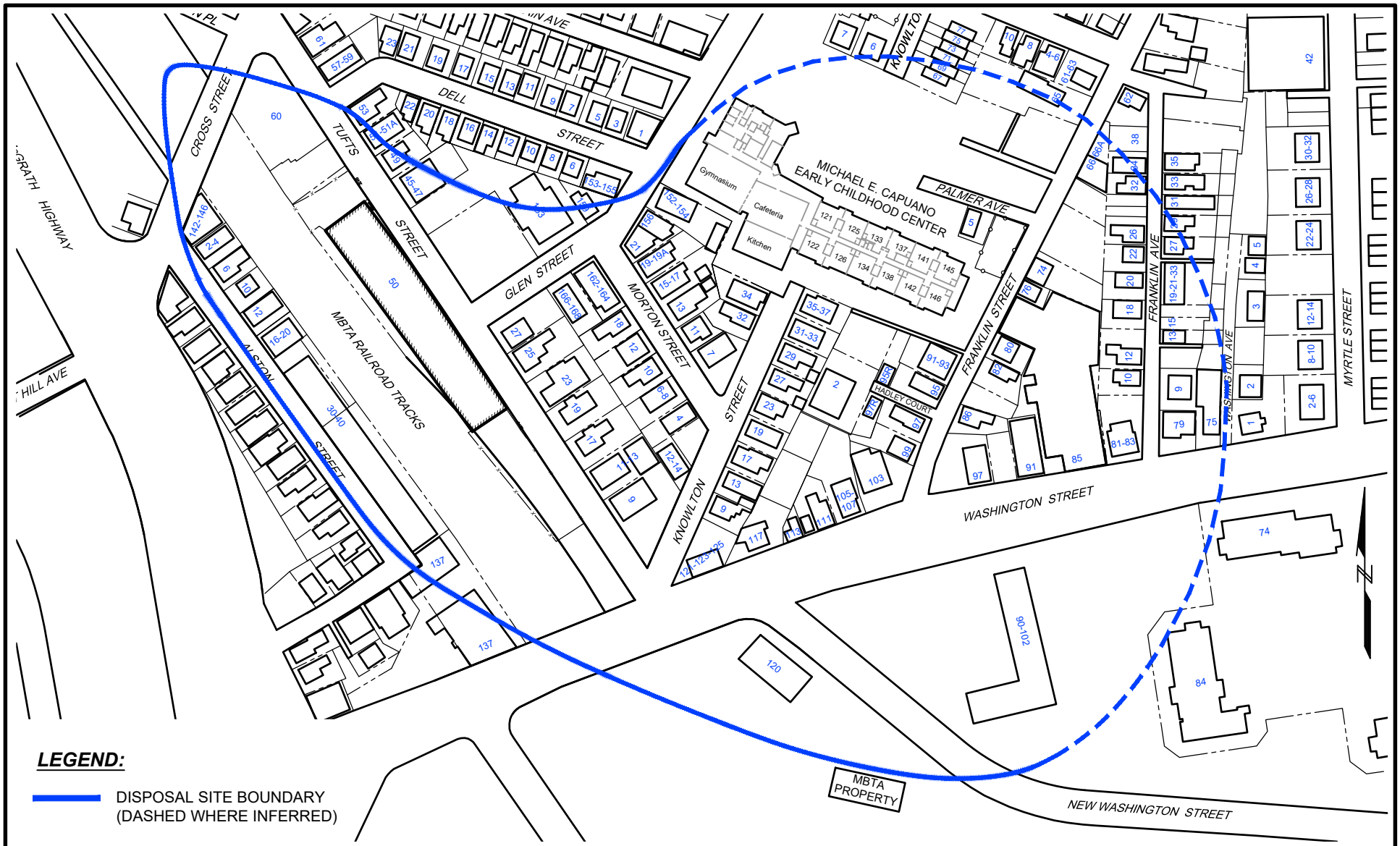
Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/COC/ISG:jam
Enclosures
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report



50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE SKETCH

Project 04516-3

June 2023

Fig . 1

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Table 1
Chemical Testing Results - Post-SSDS Installation Indoor Air
31-33 Knowlton Street
Somerville, Massachusetts

		Sample Location:	31-33 Knowlton Street							
		Sample Name:	31KNOW1		31KNOWB		31KNOW-1		31KNOW-B	
		Sample Date:	8/6/2007		8/6/2007		11/12/2007		11/12/2007	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**								
Volatile Organic Compounds (VOCs)	TO-15									
Carbon tetrachloride		0.54	< 1.3	< 0.20	< 0.69 J	< 0.11 J	< 1.3	< 0.20	0.62 J	0.099 J
Tetrachloroethylene (PCE)		1.4	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethylene (TCE)		0.4	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. MassDEP = Massachusetts Department of Environmental Protection
5. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
6. The samples collected in January 2009 (31-33KNOW-1A and 1B, and 31-33KNOW-B1 and B2) were field duplicates.
7. On January 25, 2016, GEI observed the installation of a shutdown valve on the riser pipe of the SSDS.
8. The shutdown valve was closed for 1 week prior to collection of indoor air samples on February 2, 2016, November 9, 2016, March 16, 2017 and September 20, 2017.
9. Residential Threshold Values for indoor air taken from the Massachusetts Department of Environmental Protection (MassDEP) "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure" dated October 2016.
10. Highlighted sample indicates most recent round.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Table 1
Chemical Testing Results - Post-SSDS Installation Indoor Air
31-33 Knowlton Street
Somerville, Massachusetts

		Sample Location:	31-33 Knowlton Street (continued)							
		Sample Name:	31-33KNOW-1		31-33KNOW-B		31-33KNOW-1		31-33KNOW-B	
		Sample Date:	2/6/2008		2/6/2008		7/14/2008		7/14/2008	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**								
Volatile Organic Compounds (VOCs)	TO-15									
Carbon tetrachloride		0.54	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Tetrachloroethylene (PCE)		1.4	1.9	0.28	4.9	0.72	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethylene (TCE)		0.4	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. MassDEP = Massachusetts Department of Environmental Protection
5. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
6. The samples collected in January 2009 (31-33KNOW-1A and 1B, and 31-33KNOW-B1 and B2) were field duplicates.
7. On January 25, 2016, GEI observed the installation of a shutdown valve on the riser pipe of the SSDS.
8. The shutdown valve was closed for 1 week prior to collection of indoor air samples on February 2, 2016, November 9, 2016, March 16, 2017 and September 20, 2017.
9. Residential Threshold Values for indoor air taken from the Massachusetts Department of Environmental Protection (MassDEP) "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure" dated October 2016.
10. Highlighted sample indicates most recent round.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Table 1
Chemical Testing Results - Post-SSDS Installation Indoor Air
31-33 Knowlton Street
Somerville, Massachusetts

		Sample Location:	31-33 Knowlton Street (continued)							
		Sample Name:	31-33KNOW-1A		31-33KNOW-1B		31-33KNOW-B1		31-33KNOW-B2	
		Sample Date:	1/19/09		1/19/09		1/19/09		1/19/09	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**								
Volatile Organic Compounds (VOCs)	TO-15									
Carbon tetrachloride		0.54	< 1.3	< 0.20	< 1.3	< 0.20	0.62 J	0.099 J	0.59 J	0.094 J
Tetrachloroethylene (PCE)		1.4	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.17 J	1.1 J	0.16 J
Trichloroethylene (TCE)		0.4	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. MassDEP = Massachusetts Department of Environmental Protection
5. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
6. The samples collected in January 2009 (31-33KNOW-1A and 1B, and 31-33KNOW-B1 and B2) were field duplicates.
7. On January 25, 2016, GEI observed the installation of a shutdown valve on the riser pipe of the SSDS.
8. The shutdown valve was closed for 1 week prior to collection of indoor air samples on February 2, 2016, November 9, 2016, March 16, 2017 and September 20, 2017.
9. Residential Threshold Values for indoor air taken from the Massachusetts Department of Environmental Protection (MassDEP) "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure" dated October 2016.
10. Highlighted sample indicates most recent round.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Table 1
Chemical Testing Results - Post-SSDS Installation Indoor Air
31-33 Knowlton Street
Somerville, Massachusetts

		Sample Location:	31-33 Knowlton Street (continued)							
		Sample Name:	31KNOW-1		31KNOW-B		3133KNOW-1		3133KNOW-B	
		Sample Date:	3/19/10		3/19/10		2/2/16		2/2/16	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**								
Volatile Organic Compounds (VOCs)	TO-15									
Carbon tetrachloride		0.54	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT
Tetrachloroethylene (PCE)		1.4	< 1.4	< 0.20	< 1.4	< 0.20	0.26 J	0.039 J	< 0.27	< 0.04
Trichloroethylene (TCE)		0.4	< 1.1	< 0.20	< 1.1	< 0.20	< 0.21	< 0.04	0.19 J	0.036 J

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. MassDEP = Massachusetts Department of Environmental Protection
5. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
6. The samples collected in January 2009 (31-33KNOW-1A and 1B, and 31-33KNOW-B1 and B2) were field duplicates.
7. On January 25, 2016, GEI observed the installation of a shutdown valve on the riser pipe of the SSDS.
8. The shutdown valve was closed for 1 week prior to collection of indoor air samples on February 2, 2016, November 9, 2016, March 16, 2017 and September 20, 2017.
9. Residential Threshold Values for indoor air taken from the Massachusetts Department of Environmental Protection (MassDEP) "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure" dated October 2016.
10. Highlighted sample indicates most recent round.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Table 1
Chemical Testing Results - Post-SSDS Installation Indoor Air
31-33 Knowlton Street
Somerville, Massachusetts

		Sample Location:	31-33 Knowlton Street (Continued)							
		Sample Name:	31KNOW-1		31KNOW-B		31KNOW-1		31KNOW-B	
		Sample Date:	11/9/16		11/9/16		3/16/17		3/16/17	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**								
Volatile Organic Compounds (VOCs)	TO-15									
Carbon tetrachloride		0.54	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene (PCE)		1.4	0.62	0.092	0.62	0.092	0.28	0.041	0.37	0.054
Trichloroethylene (TCE)		0.4	< 0.21	< 0.040	< 0.21	< 0.040	0.86	0.16	0.24	0.045

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. MassDEP = Massachusetts Department of Environmental Protection
5. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
6. The samples collected in January 2009 (31-33KNOW-1A and 1B, and 31-33KNOW-B1 and B2) were field duplicates.
7. On January 25, 2016, GEI observed the installation of a shutdown valve on the riser pipe of the SSDS.
8. The shutdown valve was closed for 1 week prior to collection of indoor air samples on February 2, 2016, November 9, 2016, March 16, 2017 and September 20, 2017.
9. Residential Threshold Values for indoor air taken from the Massachusetts Department of Environmental Protection (MassDEP) "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure" dated October 2016.
10. Highlighted sample indicates most recent round.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Table 1
Chemical Testing Results - Post-SSDS Installation Indoor Air
31-33 Knowlton Street
Somerville, Massachusetts

		Sample Location:	31-33 Knowlton Street (Continued)			
		Sample Name:	31-33KNOW-FF		31-33KNOW-B	
		Sample Date:	9/20/17		9/20/17	
		Units:	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**	**MassDEP Residential Indoor Air Threshold Values (µg/m^3)**				
Volatile Organic Compounds (VOCs)	TO-15					
Carbon tetrachloride		0.54	NT	NT	NT	NT
Tetrachloroethylene (PCE)		1.4	< 0.136	< 0.020	0.136	0.020
Trichloroethylene (TCE)		0.4	< 0.107	< 0.020	< 0.107	< 0.020

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. MassDEP = Massachusetts Department of Environmental Protection
5. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
6. The samples collected in January 2009 (31-33KNOW-1A and 1B, and 31-33KNOW-B1 and B2) were field duplicates.
7. On January 25, 2016, GEI observed the installation of a shutdown valve on the riser pipe of the SSDS.
8. The shutdown valve was closed for 1 week prior to collection of indoor air samples on February 2, 2016, November 9, 2016, March 16, 2017 and September 20, 2017.
9. Residential Threshold Values for indoor air taken from the Massachusetts Department of Environmental Protection (MassDEP) "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure" dated October 2016.
10. Highlighted sample indicates most recent round.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

GEI Consultants

Consulting Engineers and Scientists

July 7, 2023
Project 04516-3

CERTIFIED MAIL 9171 9690 0935 0005 3804 18

Elias and Catalina Barahona
Catalina Barahona
97 Franklin Street
Somerville, MA 02145-4231

Dear Mr. & Ms. Barahona:

Re: Indoor Air Monitoring
97 Franklin Street
Somerville, Massachusetts

The purpose of this letter is to request access to conduct sampling at your property at 97 Franklin Street in Somerville, Massachusetts. As you may recall, GEI Consultants conducted sub-slab soil vapor and indoor air testing at your property between 2007 and 2010 due to contamination originating from the 50 Tufts Street Property. The contamination was due to dissolved concentrations of chlorinated volatile organic compounds (VOCs) in groundwater. Because they are volatile, VOCs have the potential to migrate from groundwater into the indoor air of buildings. This is known as vapor intrusion.

The indoor air testing conducted at that time demonstrated a condition of "No Significant Risk" to occupants of the building. No Significant Risk is a standard established in the Massachusetts Contingency Plan (MCP) to demonstrate that exposure to residual contamination will not result in unacceptable risks to human health based on regulatory thresholds established in the MCP.

We have been regularly monitoring the groundwater in the neighborhood and the concentrations of chlorinated VOCs in groundwater near your property have increased. Due to the higher concentrations of chlorinated VOCs in the groundwater, we would like to test the soil vapor and indoor air at your property again. As in the past, this testing would be at no expense to you.

Please contact Christopher Coner at 781-721-4135 or cconer@geiconsultants.com, to answer any of your questions and to coordinate access.

Sincerely,

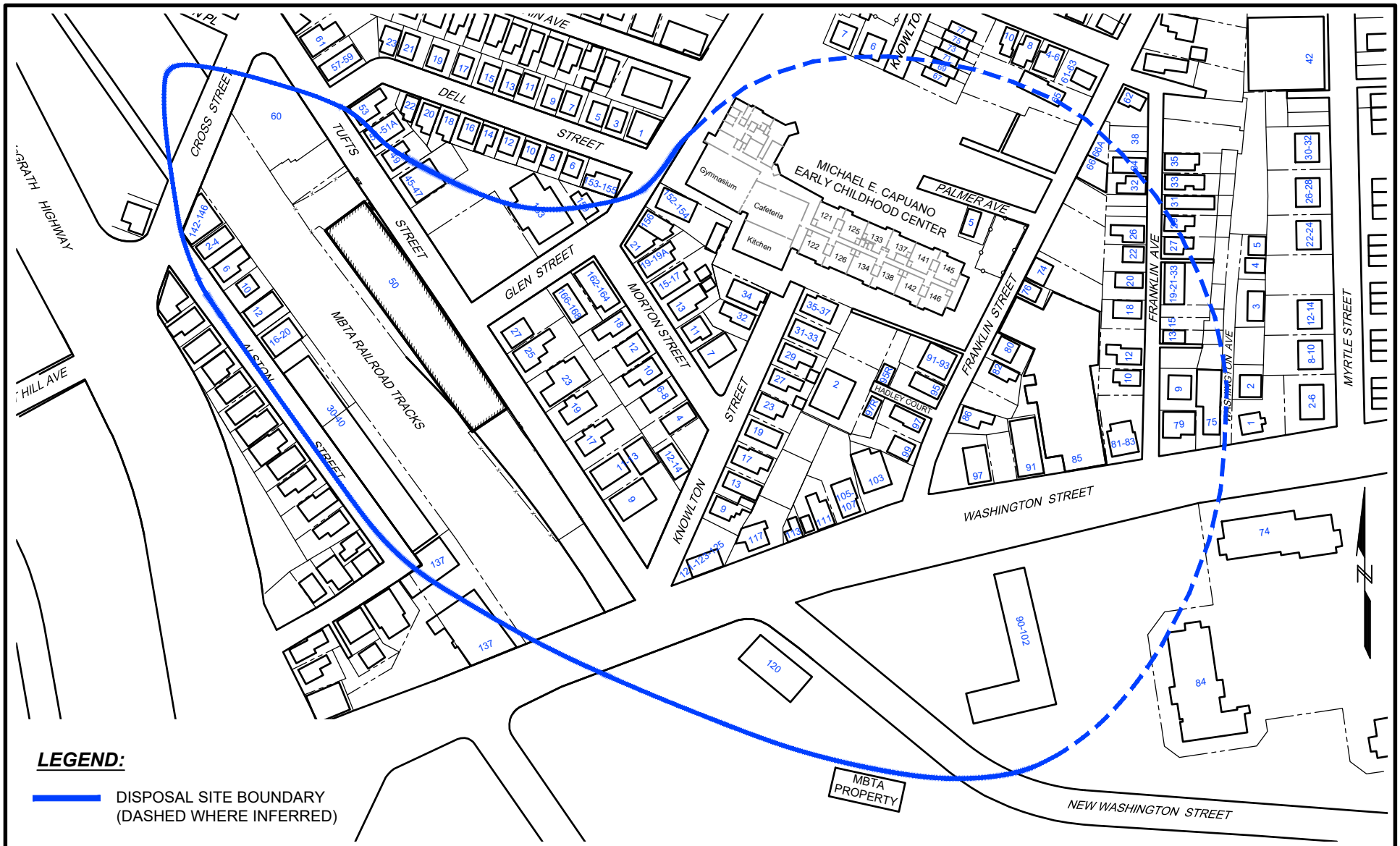
GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/COC/ISG:jam
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000



50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE SKETCH

Project 04516-3

June 2023

Fig . 1

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GEI Consultants

Consulting Engineers and Scientists

July 7, 2023
Project 04516-3

CERTIFIED MAIL 9171 9690 0935 0005 3804 01

Mr. David Cardalino
35 Knowlton Street
Somerville, MA 02145

Dear Mr. Cardalino:

Re: Summary of Indoor Air Sampling and Environmental Conditions
35-37 Knowlton Street
Somerville, Massachusetts

The purpose of this letter is to provide a summary of the environmental conditions at the property located at 35-37 Knowlton Street in Somerville, Massachusetts due to contamination originating from the property at 50 Tufts Street, and to request access to the property for continued monitoring of the sub-slab ventilation system that has previously been installed.

A release of chlorinated volatile organic compounds (VOCs) to soil and groundwater on the 50 Tufts Street Property was first reported to the Massachusetts Department of Environmental Protection (MassDEP) in 2002. Numerous studies have been conducted relating to the 50 Tufts Street Site, and response actions are currently being conducted under the Massachusetts Contingency Plan (MCP) process. Reports documenting response actions conducted at the Site are available for review at the MassDEP Northeast Regional Office in Woburn, Massachusetts. Records are accessible online at the MassDEP Searchable Sites database (https://eeaonline.eea.state.ma.us/portal#!/search/wastesite). Additionally, local public document repositories have been established at the Somerville Central Public Library and at the City of Somerville Clerk's Office. The MassDEP release tracking number (RTN) for the Site is RTN 3-23246. The 35-37 Knowlton Street property is located within the boundaries of the Site (Fig. 1).

The boundaries of the Site were delineated based on the extent of dissolved concentrations of chlorinated VOCs in groundwater. All properties within the Site, including 35-37 Knowlton Street, are serviced by municipal water. Therefore, there is limited potential for direct exposure to contamination in groundwater for human receptors within the Site. Because they are volatile, VOCs have the potential to migrate from subsurface soils or groundwater into the indoor air of buildings. This is known as vapor intrusion.

GEI collected sub-slab soil vapor samples in March 2007. Based on the sub-slab soil vapor sample testing results, an Active Exposure Pathway Mitigation Measure (AEPMM) was installed. The AEPMM consists of sub-slab ventilation piping, and an electric-powered fan to capture soil vapor from below the foundation slab and vent the vapors outside above the roofline.

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400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI performed indoor air testing after installation of the AEPMM in March 2010 and March 2011. No VOCs were detected above the laboratory reporting limits. The indoor air sampling results demonstrate that there is a condition of "No Significant Risk" to occupants of the building at 35-37 Knowlton Street. No Significant Risk is a standard established in the Massachusetts Contingency Plan (MCP) to demonstrate that exposure to residual contamination will not result in unacceptable risks to human health based on regulatory thresholds established in the MCP. At present, the condition of No Significant Risk is dependent on the continued operation of the AEPMM installed at the property.

GEI will continue to maintain, inspect, and monitor operation of the system as long as it operates. As part of routine maintenance, GEI replaces the battery in the radio node affixed to the exterior of the house and monitors the fan. GEI is requesting access to the exterior of the property to continue this maintenance.

Please contact me at igladstone@geiconsultants.com or 781-721-4012 to answer any of your questions and to coordinate access.

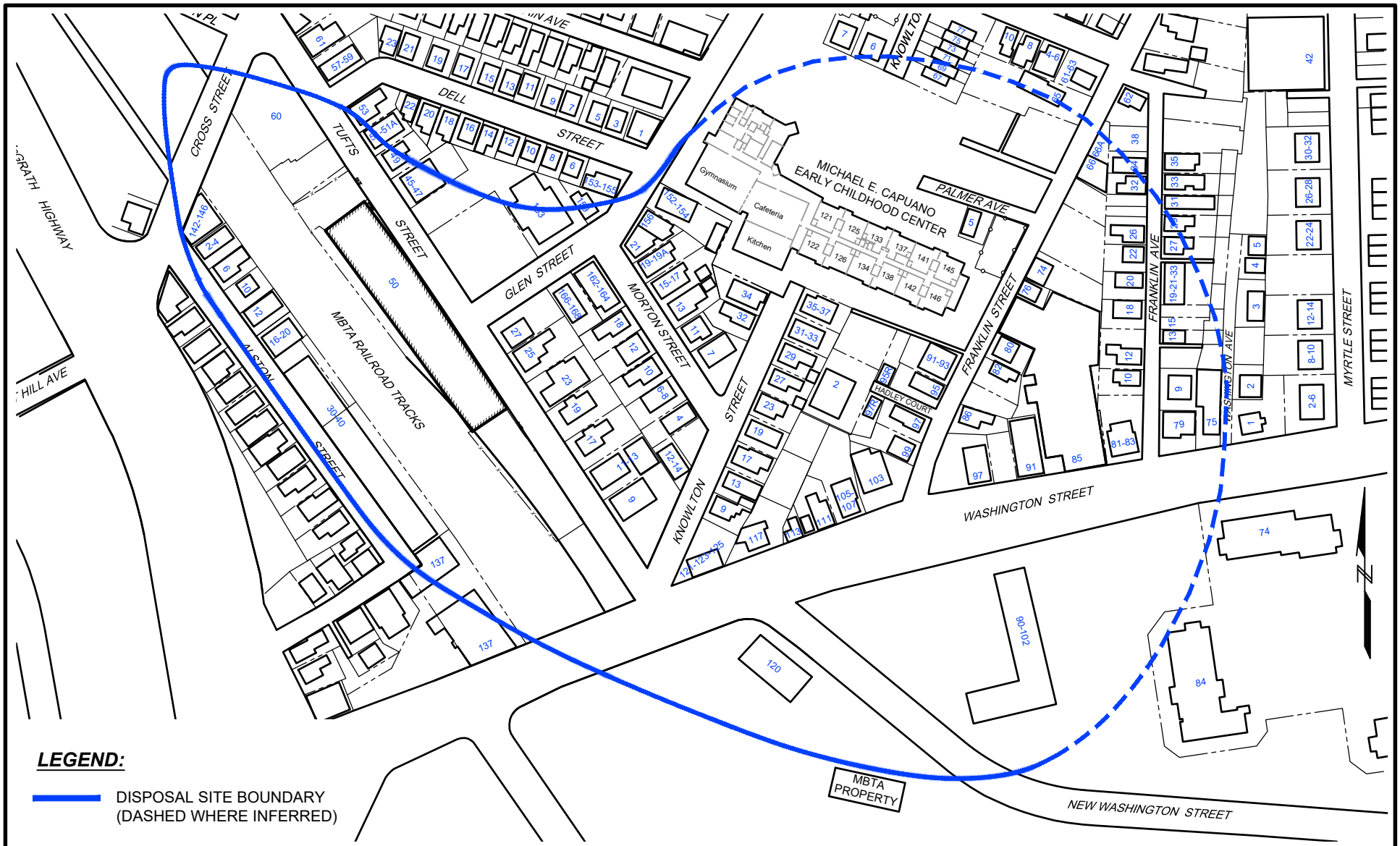
Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/COC:jam
Enclosure
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report



50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE SKETCH

Project 04516-3

June 2023

Fig . 1

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GEI Consultants

Consulting Engineers and Scientists

August 24, 2023
Project 04516-3

Mr. Greg Maynard
95 Franklin Street
Somerville, MA 02145

Dear Mr. Maynard:

Re: Summary of Indoor Air Sampling and Environmental Conditions
95 Franklin Street
Somerville, Massachusetts

The purpose of this letter is to summarize the environmental conditions at 95 Franklin Street in Somerville, Massachusetts associated with the release of chlorinated volatile organic compounds (VOCs) to soil and groundwater on the 50 Tufts Street Property. Historic indoor air sampling results demonstrate that there is a condition of "No Significant Risk" to occupants of the building at 95 Franklin Street. No Significant Risk is a standard established by MassDEP in the Massachusetts Contingency Plan (MCP) to demonstrate that exposure to residual contamination will not result in unacceptable risks to human health. At present, the condition of No Significant Risk is dependent on the continued operation of the AEPMM installed at the property.

A release of chlorinated VOCs on the 50 Tufts Street Property was first reported to the Massachusetts Department of Environmental Protection (MassDEP) in 2002. Numerous studies have been conducted relating to the 50 Tufts Street Site, and response actions are currently being conducted under the Massachusetts Contingency Plan (MCP) process. Reports documenting response actions conducted at the Site are available for review at the MassDEP Northeast Regional Office in Woburn, Massachusetts. Records are accessible online at the MassDEP Searchable Sites database (https://eeaonline.eea.state.ma.us/portal#!/search/wastesite). Additionally, local public document repositories have been established at the Somerville Central Public Library and at the City of Somerville Clerk's Office. The MassDEP release tracking number (RTN) for the Site is RTN 3-23246. The 95 Franklin Street property is located within the boundaries of the Site (Fig. 1).

The boundaries of the Site were delineated based on the extent of dissolved concentrations of chlorinated VOCs in groundwater. All properties within the Site, including 95 Franklin Street, are serviced by municipal water. Therefore, there is limited potential for direct exposure to contamination in groundwater for human receptors within the Site. Because they are volatile, VOCs have the potential to migrate from subsurface soils or groundwater into the indoor air of buildings. This is known as vapor intrusion.

GEI collected sub-slab soil vapor samples at 95 Franklin Street in April 2007. Based on the sub-slab soil vapor sample testing results, an Active Exposure Pathway Mitigation Measure (AEPMM) was installed. The AEPMM, similar to a radon system, is sub-slab ventilation piping, and an electric-powered fan that captures soil vapor from below the foundation slab and vents the vapors outside above the roofline. GEI inspects and maintains this system and confirms that it

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

continues to operate as designed. GEI will continue to maintain, inspect, and monitor operation of the system as long as it operates. As part of routine maintenance, GEI replaces the battery in the radio node affixed to the exterior of the house and monitors the fan.

GEI performed indoor air testing after installation of the AEPMM in June 2007, June 2011, December 2011, February 2012, and May 2013. The results of the sampling are in the attached Table 1. During the May 2013 sampling tetrachloroethylene (PCE) was detected at a concentration of 3.5 micrograms per cubic meter ($\mu g/m^3$) in the sample collected from the basement, PCE was not detected in the sample collected from the first floor. The laboratory testing did not detect any other VOCs at concentrations above the laboratory reporting limits.

As mentioned previously, the indoor air sampling results demonstrate that there is a condition of "No Significant Risk" to occupants of the building at 95 Franklin Street. At present, the condition of No Significant Risk is dependent on the continued operation of the AEPMM installed at the property.

Additionally, in September 2009, GEI collected one soil sample from the basement utility area where there was no concrete floor for laboratory testing of chlorinated VOCs. The laboratory testing did not detect PCE or any other chlorinated VOCs at concentrations above the laboratory reporting limits.

On September 2, 2009, a Grant of Remediation Easement and Restrictions was recorded at the Middlesex Registry of Deeds. A copy of this documented is enclosed with this letter. The property is subject to certain conditions and restrictions that affect the use of the property, including the basement, namely using the basement as living space.

Please contact Ileen Gladstone at igladstone@geiconsultants.com or 781-721-4012 if you have any questions.

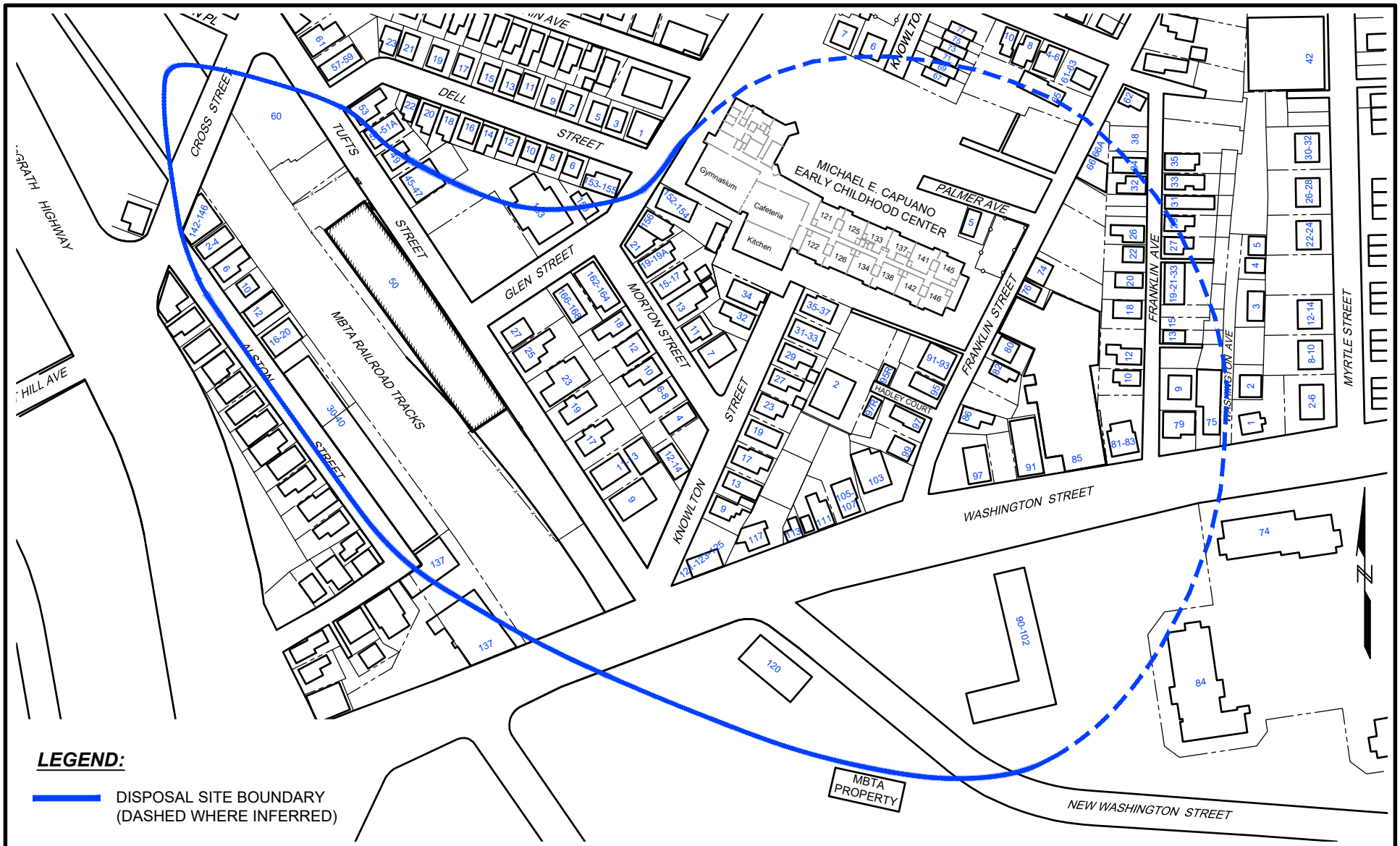
Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Christopher O. Coner, CHMM
Project Manager

COC/ISG:jam
Enclosures
c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report



50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE SKETCH

Project 04516-3

August 2023

Fig . 1

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Table 1 - Chemical Testing Results - Post-EPMM Installation Indoor Air
95 Franklin Street
Somerville, Massachusetts

Sample Location:		95 Franklin Street with Active EPMM (SSDS)				95 Franklin Street with Passive EPMM							
Sample Name:		95FRAN-1		95FRAN-B1		95 FRAN-1		95 FRAN-B		95FRAN-1		95FRAN-B	
Sample Date:		6/7/07		6/7/07		1/6/11		1/6/11		3/11/11		3/11/11	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**												
Volatile Organic Compounds (VOCs)	TO-15												
Carbon tetrachloride		0.63 J	0.10 J	0.69 J	0.11 J	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene (PCE)		8.8	1.30	8.1	1.2	14	2.1	29	4.3	22	3.2	43	6.4
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	0.91 J	0.17 J	0.86 J	0.11 J	1.6	0.30

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. NT = Not Tested.
5. EPMM = Exposure Pathway Mitigation Measure.
6. SSDS = Sub-Slab Depressurization System
7. The samples collected after June 2007 were collected over a 24-hour period ending on the date shown.
8. **No pre-EPMM indoor air samples were collected. The EPMM was installed based on sub-slab soil**
9. A fan was installed on the EPMM on March 25, 2011.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

Table 1 - Chemical Testing Results - Post-EPMM Installation Indoor Air
95 Franklin Street
Somerville, Massachusetts

Sample Location:		95 Franklin Street with Active EPMM (SSDS)															
Sample Name:		95FRAN-1		95FRAN-B1		95FRAN-1		95FRAN-B		95FRAN-1		95FRAN-B		95FRAN-1		95FRAN-B	
Sample Date:		6/24/11		6/24/11		12/13/11		12/13/11		2/3/12		2/3/12		5/17/13		5/17/13	
Units:		µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv	µg/m^3	ppbv
Analyte	**Method**																
Volatile Organic Compounds (VOCs)	TO-15																
Carbon tetrachloride		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethylene (PCE)		1.5	0.2	2.7	0.4	< 1.4	< 0.20	< 1.4	< 0.20	2.2	0.3	< 1.4	< 0.20	< 1.4	< 0.20	3.5	0.52
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m^3 = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. NT = Not Tested.
5. EPMM = Exposure Pathway Mitigation Measure.
6. SSDS = Sub-Slab Depressurization System
7. The samples collected after June 2007 were collected over a 24-hour period ending on the date shown.
8. **No pre-EPMM indoor air samples were collected. The EPMM was installed based on sub-slab soil**
9. A fan was installed on the EPMM on March 25, 2011.

Qualifying Note:

J The reported result is below the laboratory reporting limit and is estimated.

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GRANT OF REMEDIATION EASEMENT AND RESTRICTIONS

This Grant of Remediation Easement and Restrictions (the "Agreement") is entered into as of August 21, 2009 (the "Effective Date"), by and among UniFirst Corporation ("UniFirst") and Elmo C. Maynard (the "Owner") (collectively, the "Parties").

INTENT OF THE PARTIES

The Parties are entering this Agreement for the purposes, and in consideration of the mutual covenants and undertakings, set forth herein. The Parties acknowledge and agree that they are entering this Agreement for good and valuable consideration, the receipt of which is hereby acknowledged and the legal sufficiency of which is hereby conclusively established.

Owner is the owner in fee of certain real property located at 95 Franklin Street, Somerville, Massachusetts (the "Property"), more particularly described in Schedule A attached hereto and incorporated herein;

UniFirst has voluntarily agreed to make certain improvements to the building located on the Property, at no expense to Owner, to inhibit vapors from intruding through the foundation of the building (the "Exposure Pathway Elimination Measure" or "EPEM").

The Parties agree that it is in their mutual interest that UniFirst install such an Exposure Pathway Elimination Measure.

As more particularly set forth below, Owner therefore has agreed to: (i) grant UniFirst and its designees access to the Property to install, operate, monitor and maintain the EPEM; and (ii) exercise reasonable care not to cause damage to the EPEM.

I. Remediation Easement

Owner hereby grants to UniFirst and its designees the right and easement to enter upon the Property for the purpose of installing an EPEM to inhibit vapors from intruding through the foundation of the building located on the Property, and an easement for taking all actions necessary or appropriate for the operation, maintenance and monitoring of such EPEM once installed. The rights, privileges, benefits, and burdens as established by these easements shall run with the land for the mutual benefit of the Owner and UniFirst. The easements herein granted shall be perpetual.

Goodwin Procter LLP
53 Exchange Place
Boston, Massachusetts 02109
Attn: Nate Brodeur

Owner expressly reserves, and does not relinquish or abdicate her rights to any claims she may have against UniFirst, its directors, officers, or agents for impacts to the Owner, occupants or her Property caused by migration of hazardous materials from the 50 Tufts Street property to her Property, and for any damages she or her successors in interest may sustain as a result of the physical work conducted by UniFirst, its agents, assigns, and successors; and UniFirst agrees to defend, indemnify and hold harmless the Owner, her successors in interest against any claims by any agents or assigns, designees and successors of UniFirst arising from, or attributable to the work done by or for UniFirst on the property.

Neither the granting of the above-described easements nor any term or provision hereof shall be construed as, or constitute evidence of, an admission of any liability or wrongdoing by UniFirst or Owner.

II. Installation of the EPEM

Except as otherwise provided in this Agreement, UniFirst shall bear all costs associated with installation, operation, monitoring, and maintenance of the EPEM.

Owner hereby acknowledges that Owner has reviewed with the scientists and engineers from UniFirst's environmental consultants, GEI Consultants Inc. ("GEI"), the conceptual design of the EPEM, and has approved the conceptual design and work associated with the installation of the EPEM. Owner hereby acknowledges that the final design of the EPEM may be modified as the installation work progresses and the EPEM is monitored. UniFirst agrees that it shall keep Owner apprised of the progress of the work and results of the monitoring.

Owner agrees that UniFirst and/or its designees may act as an Authorized Agent of the Owner for the purpose of obtaining any and all permits required to install and maintain the EPEM, including but not limited to a permit to build, alter, or repair building systems and/or components. Owner similarly agrees that UniFirst and/or its designee may sign preliminary and final construction cost affidavits for the City of Somerville Inspectional Services Division to the extent required to obtain permits required to install and maintain the EPEM. To the extent necessary to obtain any permit required to install and maintain the EPEM, Owner shall: (i) sign a "Certificate of Good Standing" for inclusion in the application for such permit; and/or (ii) resolve any past due accounts with the City of Somerville Treasury Department.

Owner acknowledges that UniFirst will not upgrade or replace building systems or components (for example, plumbing or heating systems, air conditioning units, or water heaters) that do not meet the current Massachusetts Building Code unless specifically directed and required by the City of Somerville Inspectional Services Division. Where compliance with the Massachusetts Building Code is impractical because of construction constraints or regulatory conflicts, Owner agrees to accept Compliance Alternatives, as defined in 780 CMR 3406.

Owner acknowledges that UniFirst and/or its designees may be required to temporarily interrupt electrical, water, sewer, natural gas, telephone, and/or heat in order to install and maintain the EPEM. To the extent such interruptions are necessary; UniFirst and/or its designees will schedule service interruptions at a time, and for a duration, that is convenient for the Owner and/or the Owner's tenants.

Owner acknowledges that, prior to the installation of the EPEM, UniFirst and/or its designee may temporarily remove any items stored, and appliances (washer, dryer, dehumidifier) installed, in the basement of the building on the Property. If removed, the items shall be stored at a secure off-site location and shall be returned, and reinstalled to the extent necessary, following installation of the EPEM. UniFirst and/or its designee will provide the Owner with access to their stored items with forty-eight (48) hours notice.

Owner further acknowledges that installation and maintenance of the EPEM may require modifications to the building envelope, foundation, utility services and systems, fenestration, and/or means of egress to the basement and crawlspace. Owner hereby gives UniFirst and its designees permission to make such changes to the building as are reasonably necessary to install and/or maintain the EPEM.

As part of the EPEM installation, and subject to approval by the City of Somerville, UniFirst or its designee will install a secondary means of egress to the basement in the form of a bulkhead. Due to the limited available vertical and lateral clearance, the bulkhead opening is expected to be smaller than standard entryway dimensions. The bulkhead floor and walls will be constructed of 5,000 psi concrete, stairs constructed of pressure treated wood, and the cover comprised of a Bilco standard steel sided enclosure. The bulkhead will not have a roof structure attached to the building envelope. A weatherproof and lockable door will be installed in the foundation opening.

UniFirst and/or its designee will manage and dispose of all construction debris generated in conjunction with the installation and maintenance of the EPEM, including without limitation any waste materials generated in conjunction with interior demolition work. Notwithstanding the preceding sentence, if UniFirst and/or its designee shall encounter hazardous building materials not related to the 50 Tufts Street Site (e.g., asbestos insulation or building materials) during installation and maintenance of the EPEM, UniFirst shall bear the costs of removing and disposing of such hazardous building materials in accordance with applicable regulations, but Owner shall sign any waste manifests required for such disposal.

III. Performance of the EPEM

The objectives of the EPEM are: (i) to achieve a condition of No Significant Risk, as that term is defined in M.G.L. c. 21E and its implementing regulations at 310 CMR 40.0000 et seq., the Massachusetts Contingency Plan ("MCP"), as of the Effective Date; and (ii) to the extent feasible, eliminate or mitigate the transport of measurable concentrations of constituents of concern into living space. UniFirst agrees to make all best efforts to achieve a condition of No Significant Risk for the Property, and to the extent feasible, eliminate, or mitigate the transport of measurable concentrations of constituents of concern into living space.

Upon completion of installation of the EPEM, UniFirst and/or its designees shall conduct sufficient monitoring, in the reasonable discretion of GEI, to confirm that the EPEM is functioning as designed. UniFirst and/or its designees shall, in a reasonably timely manner, make modifications to the EPEM if the monitoring indicates that such modifications are reasonably necessary to achieve a condition of No Significant Risk.

In accordance with the MCP, UniFirst shall submit to the Massachusetts Department of Environmental Protection a Response Action Outcome ("RAO") Statement, either separately for the Property or as part of a site-wide submission. Owner acknowledges that an Activity and Use Limitation ("AUL") may need to be placed on the Property in support of the RAO Statement, and hereby agrees to sign, and authorize recordation and implementation of, a Notice of Activity and Use Limitation for the Property prepared by GEI. In pertinent part, the purpose of the AUL will be to further memorialize the undertakings by UniFirst and Owner, on behalf of themselves and their executors, heirs, successors and assigns, concerning the installation, operation, maintenance, monitoring, and preservation of the EPEM. Such AUL would include, for example, provisions relating to maintaining the integrity of the EPEM, and access to and use of the basement where the EPEM has been installed.

IV. Restricted Uses of Property

The restrictions conveyed to UniFirst in this Section IV consist of covenants on the part of the Owner to do or refrain from doing the various acts set forth below and to allow UniFirst and its designees to install, operate, maintain, and monitor the EPEM without undue interference. It is hereby acknowledged that these covenants shall constitute a servitude upon the land and run with the land.

Owner hereby agrees and covenants that Owner shall not, without the prior written consent of UniFirst alter or compromise the integrity of any components of the EPEM, including, but not limited to, foundation components and coatings, wall components and coatings, ventilation piping, and EPEM labels. Owner further agrees and covenants that Owner shall not, nor shall they permit their tenants or subtenants to, change the existing use of the basement space for storage, housing of utilities, and building and utility maintenance. The Owner shall not, nor shall they permit their tenants or subtenants to, use the basement as living space.

V. Enforcement of the Restrictions

UniFirst and/or its designees may make inspections of the building and the EPEM at reasonable times and upon reasonable notice to Owner, to assure compliance by Owner with all of the covenants and restrictions herein. In the event that UniFirst becomes aware of any event or circumstance of non-compliance with the terms and conditions herein set forth, UniFirst shall give notice to Owner of such event or circumstance of non-compliance and demand corrective action sufficient to abate such event or circumstance of non-compliance and restore the Property to its previous condition.

Failure by Owner to discontinue, abate, or take such other corrective action as may be demanded by UniFirst within a reasonable time after receipt of notice and reasonable opportunity to take corrective action shall entitle, but not obligate, UniFirst to: (i) take corrective action itself to abate such event or circumstance of non-compliance; and/or (ii) bring an action in a court of competent jurisdiction to enforce the terms of this Agreement and to recover any damages from such non-compliance. If UniFirst chooses to take corrective action, Owner shall reimburse UniFirst for all reasonable costs incurred by UniFirst in investigating the non-compliance and securing its correction. If UniFirst chooses to bring an action in a court of competent jurisdiction to enforce the terms of this Agreement and recovers any damages stemming from Owner's non-

compliance with this Agreement, such damages, when recovered, shall be applied by UniFirst to corrective action on the Property, if necessary. If a court determines that Owner has failed to comply with this Agreement, Owner shall reimburse UniFirst for any reasonable costs of enforcement, including court costs and reasonable attorneys' and consultants' fees, in addition to any other payments ordered by such court. The Parties specifically acknowledge that events and circumstances of non-compliance constitute immediate and irreparable injury, loss, and damage and accordingly entitle UniFirst to such equitable relief, including but not limited to injunctive relief, as the court deems just. The remedies described herein are in addition to, and not in limitation of, any other remedies available to UniFirst at law, in equity, or through administrative proceedings.

No delay or omission by UniFirst in the exercise of any right or remedy upon any breach by Owner shall impair UniFirst's rights or remedies or be construed as a waiver.

VI. Miscellaneous Provisions

A. UniFirst shall be entitled to record this Agreement, or to record a notice making reference to the existence of this Agreement, in the Middlesex County Registry of Deeds. In any deed conveying an interest in all or part of the Property, Owner shall make reference to the easement and restrictions described herein and shall indicate that said easement and restrictions are binding upon all successors in interest in the Property in perpetuity. Owner shall also notify UniFirst of the name(s) and address(es) of Owner's successor(s) in interest.

B. The term "Owner" shall include the heirs, executors, administrators, successors and assigns of the original Owner, Elmo C. Maynard. The term "UniFirst" shall include the successors and assigns of UniFirst Corporation.

C. This Agreement constitutes the complete agreement between the Parties and supersedes all prior understandings, negotiations, representations, and agreements, if any, between UniFirst and Owner.

D. Each Party to this Agreement represents and warrants that it, and the person executing this Agreement on such Party's behalf, is fully authorized to execute this Agreement and to bind such Party to the terms and obligations set forth in this Agreement.

E. This Agreement shall be interpreted in accordance with, and the rights of the Parties governed by, Massachusetts law, without regard to choice of law principles. The Parties agree that all actions arising out of this Agreement shall only be brought in a state or federal court in the Commonwealth of Massachusetts, and each Party consents to venue in and jurisdiction of such court.

F. The Parties do not intend this Agreement to be construed against any Party merely because such Party or such Party's counsel drafted this Agreement or any portion hereof.

G. This Agreement is entered into by the Parties voluntarily. Each Party has had the opportunity to consult counsel in the execution of this Agreement, and each fully understands and acknowledges each limitation, restriction, and obligation which may be imposed by one against another pursuant to the terms and conditions of this Agreement. There have been no

statements, representations, promises, undertakings, or inducements made to a Party by any other Party hereto, except as expressly set forth in this Agreement, that have induced any Party or Parties to enter into and/or execute this Agreement.

H. Any modification, amendment, or waiver of this Agreement (or portion of this Agreement) must be made in writing and signed by the Party to be charged with obligations arising from such modification, amendment, or waiver.

I. Invalidation of any provision hereof shall not affect any other provision of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Grant of Remediation Easement and Restrictions as of the date and year first above written.

UNIFIRST CORPORATION

BY, John R Bailey
Vice President
UniFirst Corporation

OWNER

BY, Elmo C. Maynard
Elmo C. Maynard

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF

On this 21st day of August, 2009, before me, the undersigned notary public, personally appeared ELMO C. MAYNARD, and proved to me through satisfactory evidence of identification, which was STATE OF MASSACHUSETTS ID CARD, to be the person whose name is signed on the preceding or attached document and acknowledged to me that she signed it voluntarily for its stated purpose.

William J. John (official signature and seal of notary)
My commission expires: JULY 8, 2016

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF

On this 24 day of August, 2009, before me, the undersigned notary public, personally appeared John T. Bailey, as Representative for UniFirst Corporation, proved to me through satisfactory evidence of identification, which was D.L., to be the person whose name is signed on the preceding or attached document and acknowledged to me that he/she signed it voluntarily for its stated purpose.

Marlene R. White (official signature and seal of notary)
My commission expires: 1-9-12

GEI Consultants

Consulting Engineers and Scientists

November 9, 2023
Project 04516-3

Ms. Kimberly Wells
City Clerk
93 Highland Avenue, 1st Floor
Somerville, MA 02143

Dear Ms. Wells:

Re: Groundwater Sampling
Certain "Public Ways" and 90 Washington Street Redevelopment
Somerville, Massachusetts

Thank you for permitting GEI to conduct groundwater sampling on certain public ways and at 90 Washington Street Redevelopment in Somerville, Massachusetts. We are providing you with a "Notice of Environmental Sampling Form (BWSC-123)," as required by the Massachusetts Department of Environmental Protection (MassDEP), following groundwater sampling in November 2023.

Thank you for your continued assistance. Please contact me at 781-721-4012 or igladstone@geiconsultants.com if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Christopher Coner, CHMM
Project Manager

MEF/COC/ISG:jam
Enclosure
c: Timothy Cosgrave, UniFirst Corporation
Catherine Malagrida, UniFirst Corporation
MassDEP-NERO (as part of Status Report)

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street

City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Ms. Kimberly Wells

2. Street Address: 93 Highland Ave, 1st Floor

City/Town: Somerville, MA Zip Code: 02143

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling ~~will be~~/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~/has been conducted:

1. Street Address: 90 Washington Street and Somerville City Streets

City/Town: Somerville, MA Zip Code: 02145

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☑ Phase V/Remedy Operation Status
☐ Post-Temporary Solution Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling ~~will be~~/has been conducted:

☐ residential ☐ commercial ☐ industrial ☐ school/playground ☑ Other City Streets (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.

Semi-Annual Groundwater Sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP

Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive

City/Town: Woburn, MA Zip Code: 01801-3341

Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/eea/agencies/massdep/cleanup. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://public.dep.state.ma.us/SearchableSites2/Search.aspx to view site-specific files on-line or http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Appendix C

Kleinfelder Soil, GLX Soil Precharacterization Data, and Contained-In Determinations

Tables

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Green Line Extension
Washington Street Area
Soil - Volatile Organic Compounds

			Location	B-S004-1	B-S004-2	B-S004-3	B-S004-4	B-S004-5	B-S004-6	S-BB-1	S-BB-2	S-BB-3	S-BB-4	MW-5	MW-5R	KE-117	WASHINGTON ST_ZONE 1	WASHINGTON ST_ZONE 2	WASHINGTON ST_ZONE 3
			Start Depth	21	25	0	6	0	4	0	0	10	4	2	18	0.5	0	14	19
			End Depth	23	27	2	8	2	6	2	2	12	6	4	20	4	14	19	26
			Sample Date	5/24/2010	5/24/2010	5/21/2010	5/20/2010	5/19/2010	5/18/2010	5/13/2010	5/13/2010	5/14/2010	5/14/2010	5/14/2010	9/27/2012	8/23/2012	9/13/2012	9/13/2012	9/13/2012
Analyte	RCS-1	RCS-2	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	0.1	0.1	mg/kg	<0.061	<0.073	<0.053	<0.10	<0.059	<0.065	<0.068	<0.068	<0.061	<0.068	<0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,1,1-Trichloroethane	30	600	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,1,2,2-Tetrachloroethane	0.005	0.02	mg/kg	<0.061	<0.073	<0.053	<0.10	<0.059	<0.065	<0.068	<0.068	<0.061	<0.068	<0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,1,2-Trichloroethane	0.1	2	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,1-Dichloroethane	0.4	9	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,1-Dichloroethylene	3	40	mg/kg	< 0.057	**0.09**	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,1-Dichloropropene	0.01	0.1	mg/kg	<0.061	<0.073	<0.053	<0.10	<0.059	<0.065	<0.068	<0.068	<0.061	<0.068	<0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,2,3-Trichlorobenzene				< 0.28	< 0.36	< 0.27	< 5.1	< 0.30	< 0.32	< 0.34	< 0.34	< 0.30	< 0.34	< 0.33	<0.2	< 0.3	< 0.21	< 0.18	< 0.2
1,2,3-Trichloropropane	100	1000	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
1,2,4-Trichlorobenzene	2	6	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.1	< 0.074	< 0.11	< 0.092	< 0.1
1,2,4-Trimethylbenzene	1000	10000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	**0.12**	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,2-Dibromo-3-chloropropane	10	100	mg/kg	< 0.57	< 0.73	< 0.53	<10	< 0.59	< 0.65	< 0.68	< 0.68	< 0.61	< 0.68	< 0.66	<0.2	< 0.37	< 0.21	< 0.18	< 0.2
1,2-Dibromoethane (Ethylene Dibromide)	~	~		< 0.028	< 0.036	< 0.027	< 0.51	< 0.030	< 0.032	< 0.034	< 0.034	< 0.030	< 0.034	< 0.033	<0.25	< 0.037	< 0.026	< 0.023	< 0.025
1,2-Dichlorobenzene	9	100	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,2-Dichloroethane	0.1	0.1	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,2-Dichloropropane	0.1	0.1	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,3,5-Trimethylbenzene	10	100	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,3-Dichlorobenzene	1	200	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,3-Dichloropropane	500	5000	mg/kg	< 0.028	< 0.036	< 0.027	< 0.51	< 0.030	< 0.032	< 0.034	< 0.034	< 0.030	< 0.034	< 0.033	<0.025	< 0.037	< 0.026	< 0.023	< 0.025
1,4-Dichlorobenzene	0.7	1	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
1,4-Dioxane	0.2	6	mg/kg	<2.8	<3.6	<2.7	<51	<3.0	<3.2	<3.4	<3.4	<3.0	<3.4	<3.3	<0.25	<3.7	<2.6	<2.3	<2.5
2,2-Dichloropropane	0.1	0.1	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
2-Butanone	4	50	mg/kg	< 1.1	< 1.5	< 1.1	<20	< 1.2	< 1.3	< 1.4	< 1.4	< 1.2	< 1.4	< 1.3	<1	< 1.5	< 1.1	< 0.92	< 1
2-Chlorotoluene	100	1000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
2-Hexanone	100	1000	mg/kg	< 0.57	< 0.73	< 0.53	< 10	< 0.59	< 0.65	< 0.68	< 0.68	< 0.61	< 0.68	< 0.66	<0.051	< 0.74	< 0.53	< 0.46	< 0.51
4-Chlorotoluene	100	1000	mg/kg	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
4-Isopropyltoluene	100	1000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
4-Methyl-2-pentanone	0.4	50	mg/kg	<0.57	<0.73	<0.53	<10	<0.59	<0.65	<0.68	<0.68	<0.61	<0.68	<0.66	<0.051	<0.74	<0.53	<0.46	<0.51
Acetone	6	50	mg/kg	< 2.8	< 3.6	< 2.7	<51	< 3.0	< 3.2	< 3.4	< 3.4	< 3.0	< 3.4	< 3.3	<2.5	< 3.7	< 2.6	< 2.3	< 2.5
Benzene	2	200	mg/kg	< 0.060	< 0.073	< 0.053	< 0.098	< 0.059	< 0.065	< 0.068	< 0.066	< 0.070	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Bromobenzene	100	1000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Bromochloromethane	~	~		< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Bromodichloromethane	0.1	0.1	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Bromoform	0.1	1	mg/kg	<0.061	<0.073	<0.053	<2.0	<0.059	<0.065	<0.068	<0.068	<0.061	<0.068	<0.066	<0.051	<0.074	< 0.053	< 0.046	< 0.051
Bromomethane	0.5	0.5	mg/kg	<0.114	<0.073	<0.053	<0.10	<0.059	<0.065	<0.068	<0.068	<0.061	<0.068	<0.066	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Carbon disulfide	100	1000	mg/kg	< 0.57	< 0.73	< 0.53	< 10	< 0.59	< 0.65	< 0.68	< 0.68	< 0.61	< 0.68	< 0.66	<0.051	< 0.74	< 0.53	< 0.46	< 0.51
Carbon tetrachloride	5	5	mg/kg	< 0.23	< 0.29	< 0.21	< 4.1	< 0.24	< 0.26	< 0.27	< 0.27	< 0.24	< 0.27	< 0.26	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Chlorobenzene	1	3	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Chloroethane	100	1000	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Chloroform	0.2	0.2	mg/kg	< 0.11	<0.145	< 0.11	<2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	<0.145	< 0.11	< 0.092	< 0.1
Chloromethane	100	1000	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Chlorotoluene	~	~		< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066		NT	NT	NT	NT
cis-1,2-Dichloroethylene	0.1	0.1	mg/kg	< 0.057	0.73	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
cis-1,3-Dichloropropene	0.01	0.1	mg/kg	<0.028	<0.036	<0.027	<0.51	<0.030	<0.032	<0.034	<0.034	<0.030	<0.034	<0.033	<0.051	<0.074	<0.026	<0.023	<0.025
Dibromochloromethane	0.005	0.03	mg/kg	<0.114	<0.145	<0.107	<2.0	<0.117	<0.129	<0.137	<0.137	<0.121	<0.137	<0.131	<0.1	<0.147	<0.105	<0.092	<0.102
Dibromomethane	500	5000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Dichlorodifluoromethane	1000	10000	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Diethyl ether	100	1000	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Ethyl tert-butyl ether	~	~		< 0.028	< 0.036	< 0.027	< 0.51	< 0.030	< 0.032	< 0.034	< 0.034	< 0.030	< 0.034	< 0.033	<0.25	< 0.037	< 0.026	< 0.023	< 0.025
Ethylbenzene	40	1000	mg/kg	< 0.060	< 0.073	< 0.053	< 0.098	< 0.059	< 0.065	< 0.068	< 0.066	< 0.070	< 0.068	**0.09**	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Hexachlorobutadiene	30	100	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Isopropyl ether	100	1000	mg/kg	< 0.028	< 0.036	< 0.027	< 0.51	< 0.030	< 0.032	< 0.034	< 0.034	< 0.030	< 0.034	< 0.033	<0.25	< 0.037	< 0.026	< 0.023	< 0.025
Isopropylbenzene	1000	10000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
m/p-Xylene	100	100	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	**0.21**	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Methyl tert-butyl ether	0.1	100	mg/kg	< 0.060	< 0.073	< 0.053	<0.098	< 0.059	< 0.065	< 0.068	< 0.066	< 0.070	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Methylene chloride	0.1	20	mg/kg	<0.229	<0.291	<0.214	<4.1	<0.239	<0.259	<0.273	<0.273	<0.242	<0.273	<0.263	<0.205	<0.297	<0.210	<0.184	<0.204
Naphthalene	4	20	mg/kg	< 0.60	< 0.15	< 0.11	< 0.98	**0.35**	< 0.13	**0.19**	< 0.66	< 0.70	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
n-Butylbenzene	~	~		< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
o-Xylene	100	100	mg/kg	< 0.060	< 0.073	< 0.053	< 0.098	< 0.059	< 0.065	**0.07**	< 0.066	< 0.070	< 0.068	**0.11**	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Propylbenzene	100	1000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
sec-Butylbenzene	~	~		< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.097	< 0.074	< 0.053	< 0.046	< 0.051
Styrene	3	4	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
tert-Amyl methyl ether	~	~		< 0.028	< 0.036	< 0.027	< 0.51	< 0.030	< 0.032	< 0.034	< 0.034	< 0.030	< 0.034	< 0.033	<0.25	< 0.037	< 0.026	< 0.023	< 0.025
tert-Butylbenzene	100	1000	mg/kg	< 0.057	< 0.073	< 0.053	< 1.0	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Tetrachloroethylene	1	10	mg/kg	**0.49**	0.80	< 0.053	<0.10	**0.21**	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Tetrahydrofuran	500	5000	mg/kg	< 0.57	< 0.73	< 0.53	< 10	< 0.59	< 0.65	< 0.68	< 0.68	< 0.61	< 0.68	< 0.66	<0.2	< 0.3	< 0.21	< 0.18	< 0.2
Toluene	30	1000	mg/kg	< 0.060	< 0.073	< 0.053	< 0.098	**0.17**	**0.09**	**0.09**	< 0.066	< 0.070	< 0.068	**0.13**	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
trans-1,2-Dichloroethylene	1	1	mg/kg	< 0.057	< 0.073	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
trans-1,3-Dichloropropene	0.01	0.1	mg/kg	<0.028	<0.036	<0.027	<0.51	<0.030	<0.032	<0.034	<0.034	<0.030	<0.034	<0.033	<0.051	<0.074	<0.026	<0.023	<0.025
Trichloroethylene	0.3	0.3	mg/kg	< 0.057	2.70	< 0.053	<0.10	< 0.059	< 0.065	< 0.068	< 0.068	< 0.061	< 0.068	< 0.066	<0.051	< 0.074	< 0.053	< 0.046	< 0.051
Trichlorofluoromethane	1000	10000	mg/kg	< 0.11	< 0.15	< 0.11	< 2.0	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1
Vinyl chloride	0.7	0.7	mg/kg	< 0.11	< 0.15	< 0.11	<0.20	< 0.12	< 0.13	< 0.14	< 0.14	< 0.12	< 0.14	< 0.13	<0.1	< 0.15	< 0.11	< 0.092	< 0.1

Notes:

Bold - Analyte detected above laboratory detection limits
Bold and Shaded (Blue) - Analyte detected above RCS-1
Underlined - Analyte detected above RCS-2
Bold and Gray: RL > RCS-1
~ No standard promulgated
NT- Not tested

Green Line Extension
Washington Street Area
Soil - Volatile Organic Compounds

			Location	WASHINGTON ST_ZONE 4	NDB-26	NDB-27	KE-202-WS-D	KE-202-WS-D	KE-202-WS-S	KE-204-WS	KE-204-WS	KE-205-WS	KE-205-WS	KE-206-WS	KE-206-WS	KE-207-WS	KE-208-WS	KE-209-WS	KE-210-WS	KE-210-WS
			Start Depth	26	0.5	6.5	19	24	14	0	18	0	14	10	17	14	8	15	6	15
			End Depth	32	12	27	21	26	16	1	20	2	16	10.5	19	16	8.5	17	6.5	17
			Sample Date	9/13/2012	1/7/2014	1/6/2014	3/25/2014	3/25/2014	3/25/2014	3/25/2014	4/2/2014	4/1/2014	4/1/2014	3/25/2014	4/3/2014	3/31/2014	3/25/2014	3/26/2014	3/26/2014	4/7/2014
Analyte	RCS-1	RCS-2	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
1,1,1,2-Tetrachloroethane	0.1	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,1,1-Trichloroethane	30	600	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	**0.01**	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	**0.04**
1,1,2,2-Tetrachloroethane	0.005	0.02	mg/kg	< 0.018	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
1,1,2-Trichloroethane	0.1	2	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,1-Dichloroethane	0.4	9	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	**0.01**	**0.04**
1,1-Dichloroethylene	3	40	mg/kg	< 0.045	< 0.0072	< 0.0082	< 0.0031	< 0.0028	< 0.0027	< 0.0033	< 0.0049	< 0.0055	< 0.0045	< 0.0034	< 0.0059	< 0.0049	< 0.0034	< 0.0031	< 0.0055	**0.03**
1,1-Dichloropropene	0.01	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,2,3-Trichlorobenzene				< 0.18	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
1,2,3-Trichloropropane	100	1000	mg/kg	< 0.09	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,2,4-Trichlorobenzene	2	6	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
1,2,4-Trimethylbenzene	1000	10000	mg/kg	< 0.045	**0.03**	< 0.0082	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,2-Dibromo-3-chloropropane	10	100	mg/kg	< 0.18	< 0.018	< 0.02	< 0.0077	< 0.0014	< 0.0067	< 0.0017	< 0.012	< 0.014	< 0.011	< 0.0017	< 0.015	< 0.012	< 0.0017	< 0.0078	< 0.014	< 0.016
1,2-Dibromoethane (Ethylene Dibromide)	~	~		< 0.023	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
1,2-Dichlorobenzene	9	100	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,2-Dichloroethane	0.1	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,2-Dichloropropane	0.1	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,3,5-Trimethylbenzene	10	100	mg/kg	< 0.045	**0.01**	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,3-Dichlorobenzene	1	200	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,3-Dichloropropane	500	5000	mg/kg	< 0.023	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
1,4-Dichlorobenzene	0.7	1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
1,4-Dioxane	0.2	6	mg/kg	< 2.3	< 0.18	< 0.2	< 0.077	< 0.071	< 0.067	< 0.083	< 0.12	< 0.14	< 0.11	< 0.084	< 0.15	< 0.12	< 0.086	< 0.078	< 0.14	< 0.16
2,2-Dichloropropane	0.1	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0077	< 0.0014	< 0.0067	< 0.0017	< 0.012	< 0.014	< 0.011	< 0.0017	< 0.015	< 0.012	< 0.0017	< 0.0078	< 0.014	< 0.016
2-Butanone	4	50	mg/kg	< 0.9	< 0.072	< 0.082	< 0.031	< 0.028	< 0.027	< 0.033	< 0.049	< 0.055	< 0.045	< 0.034	< 0.059	< 0.049	< 0.034	< 0.031	< 0.055	< 0.062
2-Chlorotoluene	100	1000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
2-Hexanone	100	1000	mg/kg	< 0.45	< 0.072	< 0.082	< 0.015	< 0.014	< 0.013	< 0.017	< 0.024	< 0.027	< 0.022	< 0.017	< 0.029	< 0.025	< 0.017	< 0.016	< 0.028	< 0.031
4-Chlorotoluene	100	1000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
4-Isopropyltoluene	100	1000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
4-Methyl-2-pentanone	0.4	50	mg/kg	< 0.45	< 0.036	< 0.041	< 0.015	< 0.014	< 0.013	< 0.017	< 0.024	< 0.027	< 0.022	< 0.017	< 0.029	< 0.025	< 0.017	< 0.016	< 0.028	< 0.031
Acetone	6	50	mg/kg	< 2.3	< 0.18	< 0.2	< 0.077	< 0.071	< 0.067	< 0.083	< 0.12	< 0.14	< 0.11	< 0.084	< 0.15	< 0.12	< 0.086	< 0.078	< 0.14	< 0.16
Benzene	2	200	mg/kg	< 0.045	**0.01**	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Bromobenzene	100	1000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Bromochloromethane	~	~		< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Bromodichloromethane	0.1	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Bromoform	0.1	1	mg/kg	< 0.045	< 0.018	< 0.02	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Bromomethane	0.5	0.5	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Carbon disulfide	100	1000	mg/kg	< 0.45	< 0.011	< 0.012	< 0.0046	< 0.0043	< 0.004	< 0.005	< 0.0073	< 0.0082	< 0.0067	< 0.0051	< 0.0088	< 0.0074	< 0.0051	< 0.0047	< 0.0083	< 0.0093
Carbon tetrachloride	5	5	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Chlorobenzene	1	3	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Chloroethane	100	1000	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Chloroform	0.2	0.2	mg/kg	< 0.09	< 0.0072	< 0.0082	< 0.0031	< 0.0028	< 0.0027	< 0.0033	< 0.0049	< 0.0055	< 0.0045	< 0.0034	< 0.0059	< 0.0049	< 0.0034	< 0.0031	< 0.0055	< 0.0062
Chloromethane	100	1000	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Chlorotoluene	~	~		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
cis-1,2-Dichloroethylene	0.1	0.1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	**0.01**	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	**0.03**	< 0.0016	**0.04**	< 0.0031
cis-1,3-Dichloropropene	0.01	0.1	mg/kg	< 0.023	< 0.0072	< 0.0082	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
Dibromochloromethane	0.005	0.03	mg/kg	< 0.023	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
Dibromomethane	500	5000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Dichlorodifluoromethane	1000	10000	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Diethyl ether	100	1000	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Ethyl tert-butyl ether	~	~		< 0.023	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
Ethylbenzene	40	1000	mg/kg	< 0.045	**0.02**	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Hexachlorobutadiene	30	100	mg/kg	< 0.045	< 0.0072	< 0.0082	< 0.0031	< 0.0014	< 0.0027	< 0.0017	< 0.0049	< 0.055	< 0.0045	< 0.0017	< 0.0059	< 0.0049	< 0.0017	< 0.0031	< 0.0055	< 0.0062
Isopropyl ether	100	1000	mg/kg	< 0.023	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
Isopropylbenzene	1000	10000	mg/kg	< 0.045	**0.01**	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
m/p-Xylene	100	100	mg/kg	< 0.09	**0.01**	< 0.0082	< 0.0031	< 0.0028	< 0.0027	< 0.0033	< 0.0049	< 0.0055	< 0.0045	< 0.0034	< 0.0059	< 0.0049	< 0.0034	< 0.0031	< 0.0055	< 0.0062
Methyl tert-butyl ether	0.1	100	mg/kg	< 0.045	< 0.0072	< 0.0082	< 0.0031	< 0.0028	< 0.0027	< 0.0033	< 0.0049	< 0.0055	< 0.0045	< 0.0034	< 0.0059	< 0.0049	< 0.0034	< 0.0031	< 0.0055	< 0.0062
Methylene chloride	0.1	20	mg/kg	< 0.23	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	**0.02**	< 0.016
Naphthalene	4	20	mg/kg	< 0.09	**0.03**	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
n-Butylbenzene	~	~		< 0.045	< 0.0072	< 0.0082	< 0.0031	< 0.0014	< 0.0027	< 0.0017	< 0.0049	< 0.0055	< 0.0045	< 0.0017	< 0.0059	< 0.0049	< 0.0017	< 0.0031	< 0.0055	< 0.0062
o-Xylene	100	100	mg/kg	< 0.045	**0.02**	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Propylbenzene	100	1000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
sec-Butylbenzene	~	~		< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
Styrene	3	4	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
tert-Amyl methyl ether	~	~		< 0.023	< 0.0018	< 0.002	< 0.00077	< 0.00071	< 0.00067	< 0.00083	< 0.0012	< 0.0014	< 0.0011	< 0.00084	< 0.0015	< 0.0012	< 0.00086	< 0.00078	< 0.0014	< 0.0016
tert-Butylbenzene	100	1000	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0031	< 0.0014	< 0.0027	< 0.0017	< 0.0049	< 0.0055	< 0.0045	< 0.0017	< 0.0059	< 0.0049	< 0.0017	< 0.0031	< 0.0055	< 0.0062
Tetrachloroethylene	1	10	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	**0.04**	< 0.0013	< 0.0017	**0.01**	< 0.0027	< 0.0022	< 0.0017	**0.04**	< 0.0025	< 0.0017	< 0.0016	**0.05**	< 0.0031
Tetrahydrofuran	500	5000	mg/kg	< 0.18	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Toluene	30	1000	mg/kg	< 0.045	**0.00**	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	< 0.0028	< 0.0031
trans-1,2-Dichloroethylene	1	1	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	< 0.0014	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	< 0.0017	< 0.0029	< 0.0025	< 0.0017	< 0.0016	**0.00**	< 0.0031
trans-1,3-Dichloropropene	0.01	0.1	mg/kg	< 0.023	< 0.0018	< 0.002	< 0.0031	< 0.00071	< 0.0027	< 0.00083	< 0.0049	< 0.0055	< 0.0045	< 0.00084	< 0.0059	< 0.0049	< 0.00086	< 0.0031	< 0.0055	< 0.0062
Trichloroethylene	0.3	0.3	mg/kg	< 0.045	< 0.0036	< 0.0041	< 0.0015	**0.01**	< 0.0013	< 0.0017	< 0.0024	< 0.0027	< 0.0022	**0.03**	< 0.0029	< 0.0025	**0.02**	< 0.0016	**0.05**	**0.19**
Trichlorofluoromethane	1000	10000	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016
Vinyl chloride	0.7	0.7	mg/kg	< 0.09	< 0.018	< 0.02	< 0.0077	< 0.0071	< 0.0067	< 0.0083	< 0.012	< 0.014	< 0.011	< 0.0084	< 0.015	< 0.012	< 0.0086	< 0.0078	< 0.014	< 0.016

Notes:

Bold - Analyte detected above laboratory detection limits
Bold and Shaded (Blue) - Analyte detected above RCS-1
Underlined - Analyte detected above RCS-2
Bold and Gray: RL > RCS- 1
~ No standard promulgated
NT- Not tested

Kleinfelder

Green Line Extension
Washington Street Area
Soil - Volatile Organic Compounds

			Location	KE-211-WS	KE-211-WS
			Start Depth	0	24
			End Depth	6	25
			Sample Date	3/26/2014	3/29/2014
Analyte	RCS-1	RCS-2	Unit	Result	Result
1,1,1,2-Tetrachloroethane	0.1	0.1	mg/kg	< 0.0023	< 0.0015
1,1,1-Trichloroethane	30	600	mg/kg	**0.00**	< 0.0015
1,1,2,2-Tetrachloroethane	0.005	0.02	mg/kg	< 0.0011	< 0.00076
1,1,2-Trichloroethane	0.1	2	mg/kg	< 0.0023	< 0.0015
1,1-Dichloroethane	0.4	9	mg/kg	< 0.0023	< 0.0015
1,1-Dichloroethylene	3	40	mg/kg	< 0.0046	< 0.0031
1,1-Dichloropropene	0.01	0.1	mg/kg	< 0.0023	< 0.0015
1,2,3-Trichlorobenzene				< 0.011	< 0.0076
1,2,3-Trichloropropane	100	1000	mg/kg	< 0.0023	< 0.0015
1,2,4-Trichlorobenzene	2	6	mg/kg	< 0.011	< 0.0076
1,2,4-Trimethylbenzene	1000	10000	mg/kg	< 0.0023	< 0.0015
1,2-Dibromo-3-chloropropane	10	100	mg/kg	< 0.011	< 0.0076
1,2-Dibromoethane (Ethylene Dibromide)	~	~		< 0.0011	< 0.00076
1,2-Dichlorobenzene	9	100	mg/kg	< 0.0023	< 0.0015
1,2-Dichloroethane	0.1	0.1	mg/kg	< 0.0023	< 0.0015
1,2-Dichloropropane	0.1	0.1	mg/kg	< 0.0023	< 0.0015
1,3,5-Trimethylbenzene	10	100	mg/kg	< 0.0023	< 0.0015
1,3-Dichlorobenzene	1	200	mg/kg	< 0.0023	< 0.0015
1,3-Dichloropropane	500	5000	mg/kg	< 0.0011	< 0.00076
1,4-Dichlorobenzene	0.7	1	mg/kg	< 0.0023	< 0.0015
1,4-Dioxane	0.2	6	mg/kg	< 0.11	< 0.076
2,2-Dichloropropane	0.1	0.1	mg/kg	< 0.011	< 0.0076
2-Butanone	4	50	mg/kg	< 0.046	< 0.031
2-Chlorotoluene	100	1000	mg/kg	< 0.0023	< 0.0015
2-Hexanone	100	1000	mg/kg	< 0.023	< 0.015
4-Chlorotoluene	100	1000	mg/kg	< 0.0023	< 0.0015
4-Isopropyltoluene	100	1000	mg/kg	< 0.0023	< 0.0015
4-Methyl-2-pentanone	0.4	50	mg/kg	< 0.023	< 0.015
Acetone	6	50	mg/kg	< 0.11	< 0.076
Benzene	2	200	mg/kg	< 0.0023	< 0.0015
Bromobenzene	100	1000	mg/kg	< 0.0023	< 0.0015
Bromochloromethane	~	~		< 0.0023	< 0.0015
Bromodichloromethane	0.1	0.1	mg/kg	< 0.0023	< 0.0015
Bromoform	0.1	1	mg/kg	< 0.0023	< 0.0015
Bromomethane	0.5	0.5	mg/kg	< 0.011	< 0.0076
Carbon disulfide	100	1000	mg/kg	< 0.0069	< 0.0046
Carbon tetrachloride	5	5	mg/kg	< 0.0023	< 0.0015
Chlorobenzene	1	3	mg/kg	< 0.0023	< 0.0015
Chloroethane	100	1000	mg/kg	< 0.011	< 0.0076
Chloroform	0.2	0.2	mg/kg	< 0.0046	< 0.0031
Chloromethane	100	1000	mg/kg	< 0.011	< 0.0076
Chlorotoluene	~	~		NT	NT
cis-1,2-Dichloroethylene	0.1	0.1	mg/kg	< 0.0023	< 0.0015
cis-1,3-Dichloropropene	0.01	0.1	mg/kg	< 0.0011	< 0.00076
Dibromochloromethane	0.005	0.03	mg/kg	< 0.0011	< 0.00076
Dibromomethane	500	5000	mg/kg	< 0.0023	< 0.0015
Dichlorodifluoromethane	1000	10000	mg/kg	< 0.011	< 0.0076
Diethyl ether	100	1000	mg/kg	< 0.011	< 0.0076
Ethyl tert-butyl ether	~	~		< 0.0011	< 0.00076
Ethylbenzene	40	1000	mg/kg	< 0.0023	< 0.0015
Hexachlorobutadiene	30	100	mg/kg	< 0.0046	< 0.0031
Isopropyl ether	100	1000	mg/kg	< 0.0011	< 0.00076
Isopropylbenzene	1000	10000	mg/kg	< 0.0023	< 0.0015
m/p-Xylene	100	100	mg/kg	< 0.0046	< 0.0031
Methyl tert-butyl ether	0.1	100	mg/kg	< 0.0046	< 0.0031
Methylene chloride	0.1	20	mg/kg	< 0.011	< 0.0076
Naphthalene	4	20	mg/kg	< 0.011	< 0.0076
n-Butylbenzene	~	~		< 0.0046	< 0.0031
o-Xylene	100	100	mg/kg	< 0.0023	< 0.0015
Propylbenzene	100	1000	mg/kg	< 0.0023	< 0.0015
sec-Butylbenzene	~	~		< 0.0023	< 0.0015
Styrene	3	4	mg/kg	< 0.0023	< 0.0015
tert-Amyl methyl ether	~	~		< 0.0011	< 0.00076
tert-Butylbenzene	100	1000	mg/kg	< 0.0046	< 0.0031
Tetrachloroethylene	1	10	mg/kg	**0.07**	< 0.0015
Tetrahydrofuran	500	5000	mg/kg	< 0.011	< 0.0076
Toluene	30	1000	mg/kg	< 0.0023	< 0.0015
trans-1,2-Dichloroethylene	1	1	mg/kg	< 0.0023	< 0.0015
trans-1,3-Dichloropropene	0.01	0.1	mg/kg	< 0.0046	< 0.0031
Trichloroethylene	0.3	0.3	mg/kg	**0.00**	< 0.0015
Trichlorofluoromethane	1000	10000	mg/kg	< 0.011	< 0.0076
Vinyl chloride	0.7	0.7	mg/kg	< 0.011	< 0.0076

Notes:

Bold - Analyte detected above laboratory detection limits
Bold and Shaded (Blue) - Analyte detected above RCS-1
Underlined - Analyte detected above RCS-2
Bold and Gray: RL > RCS-1
~ No standard promulgated
NT- Not tested

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-413			GLX-TPW-414
						Sample Depth^:	2 ft	2 ft	10 ft	3 ft
						Sample Date:	4/6/2020	4/6/2020	4/6/2020	4/15/2020
Analysis	Analyte	Unit	S-1/GW-1	S-1/GW-2	S-1/GW-3		Low VOC	High VOC		
VOCs										
	Methylene chloride	mg/kg	0.1	4	400	0.0066 U	0.4 U	0.003 U	0.0041 U	
	1,1-Dichloroethane	mg/kg	0.4	9	500	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Chloroform	mg/kg	0.4	0.2	500	0.002 U	0.12 U	0.00089 U	0.0012 U	
	Carbon tetrachloride	mg/kg	10	5	30	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	1,2-Dichloropropane	mg/kg	0.1	0.1	30	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Dibromochloromethane	mg/kg	0.005	0.03	20	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	1,1,2-Trichloroethane	mg/kg	0.1	2	40	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Tetrachloroethene	mg/kg	1	10	30	**0.0054**	**0.21**	**0.0033**	0.00041 U	
	Chlorobenzene	mg/kg	1	3	100	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	Trichlorofluoromethane	mg/kg	NS	NS	NS	0.0052 U	0.32 U	0.0024 U	0.0033 U	
	1,2-Dichloroethane	mg/kg	0.1	0.1	20	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	1,1,1-Trichloroethane	mg/kg	30	500	500	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	Bromodichloromethane	mg/kg	0.1	0.1	30	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	trans-1,3-Dichloropropene	mg/kg	0.01(2)	0.4(2)	20(2)	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	cis-1,3-Dichloropropene	mg/kg	0.01(2)	0.4(2)	20(2)	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	1,3-Dichloropropene, Total	mg/kg	0.01	0.4	20	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	1,1-Dichloropropene	mg/kg	NS	NS	NS	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	Bromoform	mg/kg	0.1	1	300	0.0052 U	0.32 U	0.0024 U	0.0033 U	
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	0.02	10	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	Benzene	mg/kg	2	40	40	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	Toluene	mg/kg	30	500	500	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Ethylbenzene	mg/kg	40	500	500	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Chloromethane	mg/kg	NS	NS	NS	0.0052 U	0.32 U	0.0024 U	0.0033 U	
	Bromomethane	mg/kg	0.5	0.5	30	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	Vinyl chloride	mg/kg	0.9	0.7	1	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Chloroethane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	1,1-Dichloroethene	mg/kg	3	40	500	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	trans-1,2-Dichloroethene	mg/kg	1	1	500	0.002 U	0.12 U	0.00089 U	0.0012 U	
	Trichloroethene	mg/kg	0.3	0.3	30	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	1,2-Dichlorobenzene	mg/kg	9	100	300	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	1,3-Dichlorobenzene	mg/kg	3	100	100	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	1,4-Dichlorobenzene	mg/kg	0.7	1	80	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	Methyl tert butyl ether	mg/kg	0.1	100	100	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	p/m-Xylene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	o-Xylene	mg/kg	NS	NS	NS	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Xylenes (Total)	mg/kg	400	100	500	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	cis-1,2-Dichloroethene	mg/kg	0.3	0.1	100	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Dibromomethane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	1,2,3-Trichloropropane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	Styrene	mg/kg	3	4	70	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	Dichlorodifluoromethane	mg/kg	NS	NS	NS	0.013 U	0.81 U	0.006 U	0.0082 U	
	Acetone	mg/kg	6	50	400	**0.48 E**	0.81 U	**0.066**	**0.03**	
	Carbon disulfide	mg/kg	NS	NS	NS	0.013 U	0.81 U	0.006 U	0.0082 U	
	2-Butanone	mg/kg	4	50	400	0.013 U	0.81 U	0.006 U	0.0082 U	
	4-Methyl-2-pentanone	mg/kg	0.4	50	400	0.013 U	0.81 U	0.006 U	0.0082 U	
	2-Hexanone	mg/kg	NS	NS	NS	0.013 U	0.81 U	0.006 U	0.0082 U	
	Bromochloromethane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	Tetrahydrofuran	mg/kg	NS	NS	NS	0.0052 U	0.32 U	0.0024 U	0.0033 U	
	2,2-Dichloropropane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	1,2-Dibromoethane	mg/kg	0.1	0.1	1	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	1,3-Dichloropropane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	0.1	80	0.00066 U	0.04 U	0.0003 U	0.00041 U	
	Bromobenzene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	n-Butylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	sec-Butylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U	
	tert-Butylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	o-Chlorotoluene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	
	p-Chlorotoluene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U	

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-413			GLX-TPW-414
						Sample Depth^:	2 ft	2 ft	10 ft	3 ft
						Sample Date:	4/6/2020	4/6/2020	4/6/2020	4/15/2020
Analysis	Analyte	Unit	S-1/GW-1	S-1/GW-2	S-1/GW-3		Low VOC	High VOC		
	1,2-Dibromo-3-chloropropane	mg/kg	NS	NS	NS		0.0039 U	0.24 U	0.0018 U	0.0024 U
	Hexachlorobutadiene	mg/kg	30	30	30		0.0052 U	0.32 U	0.0024 U	0.0033 U
	Isopropylbenzene	mg/kg	100(1)	100(1)	100(1)		0.0013 U	0.081 U	0.0006 U	0.00082 U
	p-Isopropyltoluene	mg/kg	100(1)	100(1)	100(1)		0.0013 U	0.081 U	0.0006 U	0.00082 U
	Naphthalene	mg/kg	4	20	500		0.0052 U	0.32 U	0.0024 U	0.0033 U
	n-Propylbenzene	mg/kg	100(1)	100(1)	100(1)		0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS		0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,2,4-Trichlorobenzene	mg/kg	2	6	700		0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,3,5-Trimethylbenzene	mg/kg	100(1)	100(1)	100(1)		0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,2,4-Trimethylbenzene	mg/kg	100(1)	100(1)	100(1)		0.0026 U	0.16 U	0.0012 U	0.0016 U
	Ethyl ether	mg/kg	NS	NS	NS		0.0026 U	0.16 U	0.0012 U	0.0016 U
	Isopropyl Ether	mg/kg	NS	NS	NS		0.0026 U	0.16 U	0.0012 U	0.0016 U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS		0.0026 U	0.16 U	0.0012 U	0.0016 U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS		0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,4-Dioxane	mg/kg	0.2	6	20		0.1 U	6.4 U	0.048 U	0.065 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

E - Value exceeds calibration range.

N/A - Not applicable.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed standards/criteria.

VOCs - Volatile Organic Compounds.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-413					
						Lab Sample ID:	L2014666-02		L2016435-01/ L2014666-01/ L2014666-02		L2016435-02/ L2014666-03/ L2014666-04	
						Sample Depth^:	2 ft		0-5/2 ft		5-10/10 ft	
						Sample Date:	4/6/2020		4/6/2020		4/6/2020	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*		Low VOC		High VOC			
SVOCs												
	Acenaphthene	mg/kg	4	NS	NS		NA		0.16	U	0.15	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		NA		0.2	U	0.19	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS		NA		0.2	U	0.19	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS		NA		0.2	U	0.19	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS		NA		0.2	U	0.19	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS		NA		0.2	U	0.19	U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS		NA		0.2	U	0.19	U
	Azobenzene	mg/kg	NS	NS	NS		NA		0.2	U	0.19	U
	Fluoranthene	mg/kg	1,000	NS	NS		NA		**0.28**		0.11	U
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS		NA		0.2	U	0.19	U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS		NA		0.21	U	0.2	U
	Hexachlorobutadiene	mg/kg	30	NS	NS		NA		0.2	U	0.19	U
	Hexachloroethane	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	Isophorone	mg/kg	100	NS	NS		NA		0.18	U	0.17	U
	Naphthalene	mg/kg	4	NS	NS		NA		0.2	U	0.19	U
	Nitrobenzene	mg/kg	500	NS	NS		NA		0.18	U	0.17	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS		NA		0.2	U	0.19	U
	Butyl benzyl phthalate	mg/kg	100	NS	NS		NA		0.2	U	0.19	U
	Di-n-butylphthalate	mg/kg	50	NS	NS		NA		0.2	U	0.19	U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS		NA		0.2	U	0.19	U
	Diethyl phthalate	mg/kg	10	NS	NS		NA		0.2	U	0.19	U
	Dimethyl phthalate	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	Benzo(a)anthracene	mg/kg	7	NS	NS		NA		**0.14**		0.11	U
	Benzo(a)pyrene	mg/kg	2	NS	NS		NA		**0.16**		0.15	U
	Benzo(b)fluoranthene	mg/kg	7	NS	NS		NA		**0.19**		0.11	U
	Benzo(k)fluoranthene	mg/kg	70	NS	NS		NA		0.12	U	0.11	U
	Chrysene	mg/kg	70	NS	NS		NA		**0.15**		0.11	U
	Acenaphthylene	mg/kg	1	NS	NS		NA		0.16	U	0.15	U
	Anthracene	mg/kg	1,000	NS	NS		NA		0.12	U	0.11	U
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS		NA		0.16	U	0.15	U
	Fluorene	mg/kg	1,000	NS	NS		NA		0.2	U	0.19	U
	Phenanthrene	mg/kg	10	NS	NS		NA		**0.16**		0.11	U
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS		NA		0.16	U	0.15	U
	Pyrene	mg/kg	1,000	NS	NS		NA		**0.26**		0.11	U
	Aniline	mg/kg	1,000	NS	NS		NA		0.24	U	0.22	U
	4-Chloroaniline	mg/kg	1	NS	NS		NA		0.2	U	0.19	U
	Dibenzofuran	mg/kg	100	NS	NS		NA		0.2	U	0.19	U
	2-Methylnaphthalene	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	Acetophenone	mg/kg	1,000	NS	NS		NA		0.2	U	0.19	U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	2-Chlorophenol	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS		NA		0.083	U	0.079	U
	2-Nitrophenol	mg/kg	100	NS	NS		NA		0.43	U	0.4	U
	4-Nitrophenol	mg/kg	100	NS	NS		NA		0.28	U	0.26	U
	2,4-Dinitrophenol	mg/kg	3	NS	NS		NA		0.95	U	0.9	U
	Pentachlorophenol	mg/kg	3	NS	NS		NA		0.4	U	0.38	U
	Phenol	mg/kg	1	NS	NS		NA		0.2	U	0.19	U
	2-Methylphenol	mg/kg	500	NS	NS		NA		0.2	U	0.19	U
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS		NA		0.28	U	0.27	U
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS		NA		0.2	U	0.19	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:		GLX-TPW-413			
						Lab Sample ID:		L2016435-01/ L2014666-01/ L2014666-02		L2016435-02/ L2014666-03/ L2014666-04	
						Sample Depth^:		2 ft		0-5/2 ft		5-10/10 ft	
						Sample Date:		4/6/2020		4/6/2020		4/6/2020	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*		Low VOC		High VOC			
	Pyridine	mg/kg	500	NS	NS	NA		0.21	U	0.2	U
	Total SVOCs	mg/kg	N/A	100	100	*NA*		***1.34***		*ND*	
Pesticides											
	Delta-BHC	mg/kg	10	NS	NS	NA		0.00190	U	0.00171	U
	Lindane	mg/kg	0.003	NS	NS	NA		0.000634	U	0.000569	U
	Alpha-BHC	mg/kg	50	NS	NS	NA		0.000792	U	0.000711	U
	Beta-BHC	mg/kg	10	NS	NS	NA		0.00190	U	0.00171	U
	Heptachlor	mg/kg	0.3	NS	NS	NA		0.000951	U	0.000853	U
	Aldrin	mg/kg	0.08	NS	NS	NA		0.00190	U	0.00171	U
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		0.00356	U	0.00320	U
	Endrin	mg/kg	10	NS	NS	NA		0.000792	U	0.000711	U
	Endrin ketone	mg/kg	NS	NS	NS	NA		0.00190	U	0.00171	U
	Dieldrin	mg/kg	0.08	NS	NS	NA		0.00119	U	0.00107	U
	4,4'-DDE	mg/kg	6	NS	NS	NA		0.00190	U	0.00171	U
	4,4'-DDD	mg/kg	8	NS	NS	NA		0.00190	U	0.00171	U
	4,4'-DDT	mg/kg	6	NS	NS	NA		**0.0137**		0.00320	U
	Endosulfan I	mg/kg	0.5	NS	NS	NA		0.00190	U	0.00171	U
	Endosulfan II	mg/kg	0.5	NS	NS	NA		0.00190	U	0.00171	U
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		0.000792	U	0.000711	U
	Methoxychlor	mg/kg	200	NS	NS	NA		0.00356	U	0.00320	U
	Chlordane	mg/kg	0.7	NS	NS	NA		0.0158	U	0.0142	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		0.00190	U	0.00171	U
Herbicides											
	MCPP	mg/kg	NS	NS	NS	NA		4	U	3.7	U
	MCPA	mg/kg	100	NS	NS	NA		4	U	3.7	U
	Dalapon	mg/kg	1,000	NS	NS	NA		0.04	U	0.037	U
	Dicamba	mg/kg	500	NS	NS	NA		0.04	U	0.037	U
	Dichloroprop	mg/kg	NS	NS	NS	NA		0.04	U	0.037	U
	2,4-D	mg/kg	100	NS	NS	NA		0.04	U	0.037	U
	2,4-DB	mg/kg	100	NS	NS	NA		0.04	U	0.037	U
	2,4,5-T	mg/kg	100	NS	NS	NA		0.04	U	0.037	U
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		0.04	U	0.037	U
PCB Aroclors											
	Aroclor-1016	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1221	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1232	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1242	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1248	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1254	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1260	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1262	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	Aroclor-1268	mg/kg	1	NS	NS	NA		0.0396	U	0.0364	U
	PCBs, Total	mg/kg	1	2	2	NA		0.0396	U	0.0364	U
TPH											
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	NA		39.4	U	36.7	U
Metals, total											
	Arsenic	mg/kg	20	40	40	NA		**8.37**		**5.91**	
	Barium	mg/kg	1,000	NS	NS	NA		**53.8**		**71.5**	
	Cadmium	mg/kg	70	30	80	NA		0.458	U	0.442	U
	Chromium	mg/kg	100	1,000	1,000	NA		**24.2**		**37.2**	
	Lead	mg/kg	200	1,000	2,000	NA		**54.2**		**7.39**	
	Mercury	mg/kg	20	10	10	NA		**0.118**		0.083	U
	Selenium	mg/kg	400	NS	NS	NA		2.29	U	2.21	U
	Silver	mg/kg	100	NS	NS	NA		0.458	U	0.442	U
General Chemistry											
	Ignitability		NS	N/A	N/A	NA		NI		NI	
	Specific conductance	umhos/cm	NS	4,000	8,000	NA		**47**		**21**	
	pH	su	NS	>2 <12.5	>2 <12.5	NA		**7.6**		**7.9**	

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-413		
						Lab Sample ID:	L2016435-01/ L2014666-01/ L2014666-02	L2016435-02/ L2014666-03/ L2014666-04	
						Sample Depth^:	2 ft	0-5/2 ft	5-10/10 ft
						Sample Date:	4/6/2020	4/6/2020	4/6/2020
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*		Low VOC	High VOC	
	Reactive Cyanide	mg/kg	NS	< 250	< 250		NA	10 U	10 U
	Reactive Sulfide	mg/kg	NS	< 500	< 500		NA	10 U	10 U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TPH - Total Petroleum Hydrocarbons.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

(1) - MassDEP RC for C9-C10 aromatics used.

(2) - MassDEP RC for Dichloropropene used.

(3) - MassDEP RC for Dichloropropane used.

(4) - MassDEP RC for Chlorotoluene used.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					LOCATION	WASH-MH212-DC-COMP		Wash-MH186-DC-Comp	
					SAMPLING DATE	7/17/2020		08/07/2020	
					LAB SAMPLE ID	20G1285-01		20H0388-01	
					SAMPLE TYPE	SOIL		SOIL	
		CasNum	RCS-1-14	RCS-2-14	Units	Results	Qual	Results	Qual
General Chemistry									
	Specific Conductance @ 25 C	SC			umhos/cm	42		16	
	Solids, Total	TSOLIDS			%	96.1		91.5	
	pH (H)	12408-02-5			SU	4	U	7.7	
	Cyanide, Reactive	GIS-250-012			mg/kg	20	U	4	U
	Sulfide, Reactive	RSULF			mg/kg	8.9		20	U
Ignitability of Solids									
	Ignitability	IGNIT				Absent		Absent	
MCP Chlorinated Herbicides									
	2,4-D	94-75-7	100	1000	mg/kg	0.026	U	0.027	U
	2,4-DB	94-82-6	100	1000	mg/kg	0.026	U	0.027	U
	2,4,5-TP (Silvex)	93-72-1	100	1000	mg/kg	0.0026	U	0.0027	U
	2,4,5-T	93-76-5	100	1000	mg/kg	0.0026	U	0.0027	U
	Dalapon	75-99-0	1000	10000	mg/kg	0.064	U	0.067	U
	Dicamba	1918-00-9	500	5000	mg/kg	0.0026	U	0.0027	U
	Dichloroprop	120-36-5			mg/kg	0.026	U	0.027	U
	Dinoseb	88-85-7	500	5000	mg/kg	0.013	U	0.013	U
	MCPA	94-74-6	100	1000	mg/kg	2.6	U	2.7	U
	MCPP	93-65-2			mg/kg	2.6	U	2.7	U
MCP Organochlorine Pesticides									
	Aldrin	309-00-2	0.08	0.5	mg/kg	0.052	U	0.054	U
	Alpha-BHC	319-84-6	50	500	mg/kg	0.052	U	0.054	U
	Beta-BHC	319-85-7	10	100	mg/kg	0.052	U	0.054	U
	Delta-BHC	319-86-8	10	100	mg/kg	0.052	U	0.054	U
	Lindane	58-89-9	0.003	0.5	mg/kg	0.021	U	0.021	U
	Chlordane	57-74-9	0.7	30	mg/kg	0.21	U	0.21	U
	4,4'-DDD	72-54-8	8	40	mg/kg	0.042	U	0.043	U
	4,4'-DDE	72-55-9	6	30	mg/kg	0.042	U	0.043	U
	4,4'-DDT	50-29-3	6	30	mg/kg	0.21		0.043	U
	Dieldrin	60-57-1	0.08	0.5	mg/kg	0.042	U	0.043	U
	Endosulfan I	959-98-8	0.5	1	mg/kg	0.052	U	0.054	U
	Endosulfan II	33213-65-9	0.5	1	mg/kg	0.083	U	0.086	U
	Endosulfan sulfate	1031-07-8			mg/kg	0.083	U	0.086	U
	Endrin	72-20-8	10	20	mg/kg	0.083	U	0.086	U
	Endrin ketone	53494-70-5			mg/kg	0.083	U	0.086	U
	Heptachlor	76-44-8	0.3	2	mg/kg	0.052	U	0.054	U
	Heptachlor epoxide	1024-57-3	0.1	0.9	mg/kg	0.052	U	0.054	U
	Hexachlorobenzene	118-74-1	0.7	0.8	mg/kg	0.062	U	0.064	U
	Methoxychlor	72-43-5	200	400	mg/kg	0.52	U	0.54	U
MCP Polychlorinated Biphenyls									
	Aroclor 1016	12674-11-2	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1221	11104-28-2	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1232	11141-16-5	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1242	53469-21-9	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1248	12672-29-6	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1254	11097-69-1	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1260	11096-82-5	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1262	37324-23-5	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1268	11100-14-4	1	4	mg/kg	0.081	U	0.087	U
	PCBs, Total	1336-36-3	1	4	mg/kg	0.081	U	0.087	U
MCP Semivolatile Organics									
	Acenaphthene	83-32-9	4	3000	mg/kg	0.18	U	0.18	U
	Acenaphthylene	208-96-8	1	10	mg/kg	0.18	U	0.18	U
	Acetophenone	98-86-2	1000	10000	mg/kg	0.35	U	0.37	U
	Aniline	62-53-3	1000	10000	mg/kg	0.35	U	0.37	U
	Anthracene	120-12-7	1000	3000	mg/kg	0.18	U	0.18	U
	Benzo(a)anthracene	56-55-3	7	40	mg/kg	0.47		0.44	
	Benzo(a)pyrene	50-32-8	2	7	mg/kg	0.45		0.43	
	Benzo(b)fluoranthene	205-99-2	7	40	mg/kg	0.59		0.55	
	Benzo(ghi)perylene	191-24-2	1000	3000	mg/kg	0.26		0.24	
	Benzo(k)fluoranthene	207-08-9	70	400	mg/kg	0.23		0.2	
	Bis(2-chloroethoxy)methane	111-91-1	500	5000	mg/kg	0.35	U	0.37	U
	Bis(2-chloroethyl)ether	111-44-4	0.7	0.7	mg/kg	0.35	U	0.37	U
	Bis(2-chloroisopropyl)ether	39638-32-9	0.7	0.7	mg/kg	0.35	U	0.37	U
	Bis(2-ethylhexyl)phthalate	117-81-7	90	600	mg/kg	0.35	U	0.37	U
	4-Bromophenyl phenyl ether	101-55-3	100	1000	mg/kg	0.35	U	0.37	U
	Butyl benzyl phthalate	85-68-7	100	1000	mg/kg	0.35	U	0.37	U
	4-Chloroaniline	106-47-8	1	3	mg/kg	0.69	U	0.72	U
	2-Chloronaphthalene	91-58-7	1000	10000	mg/kg	0.35	U	0.37	U
	2-Chlorophenol	95-57-8	0.7	100	mg/kg	0.35	U	0.37	U
	Chrysene	218-01-9	70	400	mg/kg	0.48		0.47	
	Dibenzo(a,h)anthracene	53-70-3	0.7	4	mg/kg	0.18	U	0.18	U
	Dibenzofuran	132-64-9	100	1000	mg/kg	0.35	U	0.37	U
	Di-n-butylphthalate	84-74-2	50	500	mg/kg	0.35	U	0.37	U
	1,2-Dichlorobenzene	95-50-1	9	100	mg/kg	0.35	U	0.37	U
	1,3-Dichlorobenzene	541-73-1	3	200	mg/kg	0.35	U	0.37	U
	1,4-Dichlorobenzene	106-46-7	0.7	1	mg/kg	0.35	U	0.37	U
	3,3'-Dichlorobenzidine	91-94-1	3	20	mg/kg	0.18	U	0.18	U
	2,4-Dichlorophenol	120-83-2	0.7	40	mg/kg	0.35	U	0.37	U
	Diethyl phthalate	84-66-2	10	200	mg/kg	0.35	U	0.37	U
	2,4-Dimethylphenol	105-67-9	0.7	100	mg/kg	0.35	U	0.37	U
	Dimethyl phthalate	131-11-3	0.7	50	mg/kg	0.35	U	0.37	U
	2,4-Dinitrophenol	51-28-5	3	50	mg/kg	0.69	U	0.72	U
	2,4-Dinitrotoluene	121-14-2	0.7	10	mg/kg	0.35	U	0.37	U
	2,6-Dinitrotoluene	606-20-2	100	1000	mg/kg	0.35	U	0.37	U
	Di-n-octylphthalate	117-84-0	1000	10000	mg/kg	0.35	U	0.37	U
	Azobenzene	122-66-7	50	500	mg/kg	0.35	U	0.37	U
	Fluoranthene	206-44-0	1000	3000	mg/kg	0.92		0.84	
	Fluorene	86-73-7	1000	3000	mg/kg	0.18	U	0.18	U
	Hexachlorobenzene	118-74-1	0.7	0.8	mg/kg	0.35	U	0.37	U
	Hexachlorobutadiene	87-68-3	30	100	mg/kg	0.35	U	0.37	U
	Hexachloroethane	67-72-1	0.7	3	mg/kg	0.35	U	0.37	U
	Indeno(1,2,3-cd)pyrene	193-39-5	7	40	mg/kg	0.28		0.3	
	Isophorone	78-59-1	100	1000	mg/kg	0.35	U	0.37	U
	2-Methylnaphthalene	91-57-6	0.7	80	mg/kg	0.18	U	0.18	U
	2-Methylphenol	95-48-7	500	5000	mg/kg	0.35	U	0.37	U
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	500	5000	mg/kg	0.35	U	0.37	U
	Naphthalene	91-20-3	4	20	mg/kg	0.18	U	0.18	U
	Nitrobenzene	98-95-3	500	5000	mg/kg	0.35	U	0.37	U
	2-Nitrophenol	88-75-5	100	1000	mg/kg	0.35	U	0.37	U
	4-Nitrophenol	100-02-7	100	1000	mg/kg	0.69	U	0.72	U
	Pentachlorophenol	87-86-5	3	10	mg/kg	0.35	U	0.37	U
	Phenanthrene	85-01-8	10	1000	mg/kg	0.62		0.6	
	Phenol	108-95-2	1	20	mg/kg	0.35	U	0.37	U
	Pyrene	129-00-0	1000	3000	mg/kg	0.87		0.92	
	Pyridine	110-86-1	500	5000	mg/kg	0.35	U	0.37	U
	1,2,4-Trichlorobenzene	120-82-1	2	6	mg/kg	0.35	U	0.37	U
	2,4,5-Trichlorophenol	95-95-4	4	600	mg/kg	0.35	U	0.37	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					LOCATION	WASH-MH212-DC-COMP		Wash-MH186-DC-Comp	
					SAMPLING DATE	7/17/2020		08/07/2020	
					LAB SAMPLE ID	20G1285-01		20H0388-01	
					SAMPLE TYPE	SOIL		SOIL	
		CasNum	RCS-1-14	RCS-2-14	Units	Results	Qual	Results	Qual
	2,4,6-Trichlorophenol	88-06-2	0.7	20	mg/kg	0.35	U	0.37	U
	Total SVOCs				mg/kg	5.17		4.99	
MCP Total Metals									
	Antimony, Total	7440-36-0	20	30	mg/kg	1.7	U	1.8	U
	Arsenic, Total	7440-38-2	20	20	mg/kg	6.2		9.8	
	Barium, Total	7440-39-3	1000	3000	mg/kg	44		64	
	Beryllium, Total	7440-41-7	90	200	mg/kg	0.40		0.47	
	Cadmium, Total	7440-43-9	70	100	mg/kg	0.34	U	0.35	U
	Chromium, Total	7440-47-3	100	200	mg/kg	24		22	
	Lead, Total	7439-92-1	200	600	mg/kg	66		170	
	Mercury, Total	7439-97-6	20	30	mg/kg	0.22		0.14	
	Nickel, Total	7440-02-0	600	1000	mg/kg	22		21	
	Selenium, Total	7782-49-2	400	700	mg/kg	3.4	U	3.5	U
	Silver, Total	7440-22-4	100	200	mg/kg	0.34	U	0.35	U
	Thallium, Total	7440-28-0	8	60	mg/kg	1.7	U	1.8	U
	Vanadium, Total	7440-62-2	400	700	mg/kg	36		41	
	Zinc, Total	7440-66-6	1000	3000	mg/kg	77		90	

U - Not detected at the reported detection limit for the sample.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					LOCATION	WASH-MH119-DC-COMP		WASH-MH281-DC-COMP	
					SAMPLING DATE	8/18/2020		8/18/2020	
					LAB SAMPLE ID	L2034460-01		L2034460-02	
					SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-LLAND	MA-ULAND	Units	Results	Qual	Results	Qual
General Chemistry									
	Specific Conductance @ 25 C	NONE	8000	4000	umhos/cm	100		190	
	Solids, Total	NONE			%	91		91.4	
	pH (H)	12408-02-5			SU	7.8		8.1	
	Cyanide, Reactive	57-12-5			mg/kg	10	U	10	U
	Sulfide, Reactive	NONE			mg/kg	10	U	10	U
Ignitability of Solids									
	Ignitability	NONE				NI		NI	
MCP Chlorinated Herbicides									
	MCPP	93-65-2			mg/kg	3.6	U	3.6	U
	MCPA	94-74-6			mg/kg	3.6	U	3.6	U
	Dalapon	75-99-0			mg/kg	0.036	U	0.036	U
	Dicamba	1918-00-9			mg/kg	0.036	U	0.036	U
	Dichloroprop	120-36-5			mg/kg	0.036	U	0.036	U
	2,4-D	94-75-7			mg/kg	0.036	U	0.036	U
	2,4-DB	94-82-6			mg/kg	0.036	U	0.036	U
	2,4,5-T	93-76-5			mg/kg	0.036	U	0.036	U
	2,4,5-TP (Silvex)	93-72-1			mg/kg	0.036	U	0.036	U
MCP Organochlorine Pesticides									
	Delta-BHC	319-86-8			mg/kg	0.00174	U	0.00171	U
	Lindane	58-89-9			mg/kg	0.00058	U	0.000569	U
	Alpha-BHC	319-84-6			mg/kg	0.000724	U	0.000711	U
	Beta-BHC	319-85-7			mg/kg	0.00174	U	0.00171	U
	Heptachlor	76-44-8			mg/kg	0.000869	U	0.000854	U
	Aldrin	309-00-2			mg/kg	0.00174	U	0.00171	U
	Heptachlor epoxide	1024-57-3			mg/kg	0.00326	U	0.0032	U
	Endrin	72-20-8			mg/kg	0.000724	U	0.000711	U
	Endrin ketone	53494-70-5			mg/kg	0.00174	U	0.00171	U
	Dieldrin	60-57-1			mg/kg	0.00109	U	0.00107	U
	4,4'-DDE	72-55-9			mg/kg	0.00174	U	0.00171	U
	4,4'-DDD	72-54-8			mg/kg	0.00174	U	0.00171	U
	4,4'-DDT	50-29-3			mg/kg	0.00326	U	0.0032	U
	Endosulfan I	959-98-8			mg/kg	0.00174	U	0.00171	U
	Endosulfan II	33213-65-9			mg/kg	0.00174	U	0.00171	U
	Endosulfan sulfate	1031-07-8			mg/kg	0.000724	U	0.000711	U
	Methoxychlor	72-43-5			mg/kg	0.00326	U	0.0032	U
	Chlordane	57-74-9			mg/kg	0.0145	U	0.0142	U
	Hexachlorobenzene	118-74-1			mg/kg	0.00174	U	0.00171	U
MCP Polychlorinated Biphenyls									
	Aroclor 1016	12674-11-2			mg/kg	0.0357	U	0.0346	U
	Aroclor 1221	11104-28-2			mg/kg	0.0357	U	0.0346	U
	Aroclor 1232	11141-16-5			mg/kg	0.0357	U	0.0346	U
	Aroclor 1242	53469-21-9			mg/kg	0.0357	U	0.0346	U
	Aroclor 1248	12672-29-6			mg/kg	0.0357	U	0.0346	U
	Aroclor 1254	11097-69-1			mg/kg	0.0357	U	0.0346	U
	Aroclor 1260	11096-82-5			mg/kg	0.0357	U	0.0346	U
	Aroclor 1262	37324-23-5			mg/kg	0.0357	U	0.0346	U
	Aroclor 1268	11100-14-4			mg/kg	0.0357	U	0.0346	U
	PCBs, Total	1336-36-3	2	2	mg/kg	0.0357	U	0.0346	U
MCP Semivolatile Organics									
	Acenaphthene	83-32-9			mg/kg	0.14	U	0.14	
	1,2,4-Trichlorobenzene	120-82-1			mg/kg	0.18	U	0.18	U
	Hexachlorobenzene	118-74-1			mg/kg	0.076	U	0.076	U
	Bis(2-chloroethyl)ether	111-44-4			mg/kg	0.076	U	0.076	U
	2-Chloronaphthalene	91-58-7			mg/kg	0.18	U	0.18	U
	1,2-Dichlorobenzene	95-50-1			mg/kg	0.18	U	0.18	U
	1,3-Dichlorobenzene	541-73-1			mg/kg	0.18	U	0.18	U
	1,4-Dichlorobenzene	106-46-7			mg/kg	0.076	U	0.076	U
	3,3'-Dichlorobenzidine	91-94-1			mg/kg	0.18	U	0.18	U
	2,4-Dinitrotoluene	121-14-2			mg/kg	0.076	U	0.076	U
	2,6-Dinitrotoluene	606-20-2			mg/kg	0.18	U	0.18	U
	Azobenzene	103-33-3			mg/kg	0.18	U	0.18	U
	Fluoranthene	206-44-0			mg/kg	0.27		1.6	
	4-Bromophenyl phenyl ether	101-55-3			mg/kg	0.18	U	0.18	U
	Bis(2-chloroisopropyl)ether	108-60-1			mg/kg	0.076	U	0.076	U
	Bis(2-chloroethoxy)methane	111-91-1			mg/kg	0.2	U	0.2	U
	Hexachlorobutadiene	87-68-3			mg/kg	0.18	U	0.18	U
	Hexachloroethane	67-72-1			mg/kg	0.076	U	0.076	U
	Isophorone	78-59-1			mg/kg	0.16	U	0.16	U
	Naphthalene	91-20-3			mg/kg	0.18	U	0.57	
	Nitrobenzene	98-95-3			mg/kg	0.16	U	0.16	U
	Bis(2-ethylhexyl)phthalate	117-81-7			mg/kg	0.18	U	0.18	U
	Butyl benzyl phthalate	85-68-7			mg/kg	0.18	U	0.18	U
	Di-n-butylphthalate	84-74-2			mg/kg	0.18	U	0.18	U
	Di-n-octylphthalate	117-84-0			mg/kg	0.18	U	0.18	U
	Diethyl phthalate	84-66-2			mg/kg	0.18	U	0.18	U
	Dimethyl phthalate	131-11-3			mg/kg	0.076	U	0.076	U
	Benzo(a)anthracene	56-55-3			mg/kg	0.2		1.3	
	Benzo(a)pyrene	50-32-8			mg/kg	0.17		1.2	
	Benzo(b)fluoranthene	205-99-2			mg/kg	0.26		1.6	
	Benzo(k)fluoranthene	207-08-9			mg/kg	0.11	U	0.36	
	Chrysene	218-01-9			mg/kg	0.16		1.1	
	Acenaphthylene	208-96-8			mg/kg	0.14	U	0.31	
	Anthracene	120-12-7			mg/kg	0.11	U	0.38	
	Benzo(ghi)perylene	191-24-2			mg/kg	0.14	U	0.83	
	Fluorene	86-73-7			mg/kg	0.18	U	0.21	
	Phenanthrene	85-01-8			mg/kg	0.14		1	
	Dibenzo(a,h)anthracene	53-70-3			mg/kg	0.076	U	0.19	
	Indeno(1,2,3-cd)pyrene	193-39-5			mg/kg	0.14	U	0.92	
	Pyrene	129-00-0			mg/kg	0.26		1.8	
	Aniline	62-53-3			mg/kg	0.22	U	0.22	U
	4-Chloroaniline	106-47-8			mg/kg	0.18	U	0.18	U
	Dibenzofuran	132-64-9			mg/kg	0.18	U	0.18	U
	2-Methylnaphthalene	91-57-6			mg/kg	0.076	U	0.29	
	Acetophenone	98-86-2			mg/kg	0.18	U	0.18	U
	2,4,6-Trichlorophenol	88-06-2			mg/kg	0.076	U	0.076	U
	2-Chlorophenol	95-57-8			mg/kg	0.076	U	0.076	U
	2,4-Dichlorophenol	120-83-2			mg/kg	0.076	U	0.076	U
	2,4-Dimethylphenol	105-67-9			mg/kg	0.076	U	0.076	U
	2-Nitrophenol	88-75-5			mg/kg	0.39	U	0.39	U
	4-Nitrophenol	100-02-7			mg/kg	0.25	U	0.25	U
	2,4-Dinitrophenol	51-28-5			mg/kg	0.87	U	0.87	U
	Pentachlorophenol	87-86-5			mg/kg	0.36	U	0.36	U
	Phenol	108-95-2			mg/kg	0.18	U	0.18	U
	2-Methylphenol	95-48-7			mg/kg	0.18	U	0.18	U
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5			mg/kg	0.26	U	0.26	U
	2,4,5-Trichlorophenol	95-95-4			mg/kg	0.18	U	0.18	U
	Pyridine	110-86-1			mg/kg	0.2	U	0.2	U
	Total SVOCs		100	100	mg/kg	1.46		13.8	
MCP Total Metals									
	Antimony, Total	7440-36-0			mg/kg	2.16	U	2.15	U
	Arsenic, Total	7440-38-2	40	40	mg/kg	7.55		5.48	
	Barium, Total	7440-39-3			mg/kg	38.6		41.4	
	Beryllium, Total	7440-41-7			mg/kg	0.216	U	0.215	U
	Cadmium, Total	7440-43-9	80	30	mg/kg	0.565		0.593	
	Chromium, Total	7440-47-3	1000	1000	mg/kg	14.3		17	

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					LOCATIO	WASH-MH119-DC-COMP		WASH-MH281-DC-COMP	
					SAMPLING DATE	8/18/2020		8/18/2020	
					LAB SAMPLE ID	L2034460-01		L2034460-02	
					SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-LLAND	MA-ULAND	Units	Results	Qual	Results	Qual
	Lead, Total	7439-92-1	2000	1000	mg/kg	53.1		96.8	
	Mercury, Total	7439-97-6	10	10	mg/kg	0.342		0.165	
	Nickel, Total	7440-02-0			mg/kg	11.5		13.7	
	Selenium, Total	7782-49-2			mg/kg	2.16	U	2.15	U
	Silver, Total	7440-22-4			mg/kg	0.431	U	0.43	U
	Thallium, Total	7440-28-0			mg/kg	2.16	U	2.15	U
	Vanadium, Total	7440-62-2			mg/kg	22.5		20.4	
	Zinc, Total	7440-66-6			mg/kg	52.7		90.6	

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						LOCATION	WASH-MH212(A)-DC-VOC-1		WASH-MH212(B)-DC-VOC-1		WASH-MH212(C)-DC-VOC-1		WASH-MH212(D)-DC-VOC-1	
						SAMPLING DATE	7/17/2020		7/17/2020		7/17/2020		7/17/2020	
						LAB SAMPLE ID	20G1126-01		20G1126-02		20G1126-03		20G1126-04	
						SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL	
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035														
	Methylene chloride	75-09-2	0.1	4	400	mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Chloroform	67-66-3	0.4	0.2	500	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
	Carbon tetrachloride	56-23-5	10	5	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
	1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Tetrachloroethene	127-18-4	1	10	30	mg/kg	0.0048		0.0036		0.0046		0.0046	
	Chlorobenzene	108-90-7	1	3	100	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Trichlorofluoromethane	75-69-4				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
	cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
	1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	-	-	-	-	-	-	-	-
	1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Bromoform	75-25-2	0.1	1	300	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
	Benzene	71-43-2	2	40	40	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Toluene	108-88-3	30	500	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Ethylbenzene	100-41-4	40	500	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Chloromethane	74-87-3				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	Bromomethane	74-83-9	0.5	0.5	30	mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	Chloroethane	75-00-3				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
	trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
	p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
	o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Xylenes, Total	1330-20-7	400	100	500	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
	cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2-Dichloroethene, Total	540-59-0				mg/kg	-	-	-	-	-	-	-	-
	Dibromomethane	74-95-3				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2,3-Trichloropropane	96-18-4				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Styrene	100-42-5	3	4	70	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Dichlorodifluoromethane	75-71-8				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	Acetone	67-64-1	6	50	400	mg/kg	0.21		0.088	U	0.31		0.20	
	Carbon disulfide	75-15-0				mg/kg	0.0049	U	0.0053	U	0.0046	U	0.0053	U
	Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	0.033	U	0.035	U	0.031	U	0.035	U
	Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	0.016	U	0.018	U	0.015	U	0.018	U
	2-Hexanone	591-78-6				mg/kg	0.016	U	0.018	U	0.015	U	0.018	U
	Bromochloromethane	74-97-5				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Tetrahydrofuran	109-99-9				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
	2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
	1,3-Dichloropropane	142-28-9				mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
	1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Bromobenzene	108-86-1				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
	tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U

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Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

							LOCATION	WASH-MH212(A)-DC-VOC-1		WASH-MH212(B)-DC-VOC-1		WASH-MH212(C)-DC-VOC-1		WASH-MH212(D)-DC-VOC-1	
							SAMPLING DATE	7/17/2020		7/17/2020		7/17/2020		7/17/2020	
							LAB SAMPLE ID	20G1126-01		20G1126-02		20G1126-03		20G1126-04	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL	
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units		Results	Qual	Results	Qual	Results	Qual	Results	Qual
	o-Chlorotoluene	95-49-8				mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	p-Chlorotoluene	106-43-4				mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2-Dibromo-3-chloropropane	96-12-8				mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Hexachlorobutadiene	87-68-3	30	30	30	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Naphthalene	91-20-3	4	20	500	mg/kg		0.0033	U	0.0035	U	0.0031	U	0.0035	U
	n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2,3-Trichlorobenzene	87-61-6				mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg		0.0016	U	0.0018	U	0.0015	U	0.0018	U
	Diethyl ether	60-29-7				mg/kg		0.0082	U	0.0088	U	0.0077	U	0.0088	U
	Diisopropyl Ether	108-20-3				mg/kg		0.00082	U	0.00088	U	0.00077	U	0.00088	U
	Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg		0.00082	U	0.00088	U	0.00077	U	0.00088	U
	Tertiary-Amyl Methyl Ether	994-05-8				mg/kg		0.00082	U	0.00088	U	0.00077	U	0.00088	U
	1,4-Dioxane	123-91-1	0.2	6	20	mg/kg		0.082	U	0.088	U	0.077	U	0.088	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
U - Not detected at the reported detection limit for the sample.
- Not analyzed.
(1) - Value for C9-C10 aromatics used.
(2) -Value for 1,3-Dichloropropene used.
(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						LOCATION	WASH-MH212(E)-DC-VOC-1		WASH-MH212(F)-DC-VOC-1		WASH-MH212(G)-DC-VOC-1		Wash-MH186(A)-DC-VOC		Wash-MH186(B)-DC-VOC
						SAMPLING DATE	7/17/2020		7/17/2020		7/17/2020		8/7/2020		8/7/2020
						LAB SAMPLE ID	20G1126-05		20G1126-06		20G1126-07		20H0387-01		20H0387-02
						SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results
MCP Volatile Organics by EPA 5035															
	Methylene chloride	75-09-2	0.1	4	400	mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Chloroform	67-66-3	0.4	0.2	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
	Carbon tetrachloride	56-23-5	10	5	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Tetrachloroethene	127-18-4	1	10	30	mg/kg	0.0043		0.0051		0.0022	U	0.0094		0.0087
	Chlorobenzene	108-90-7	1	3	100	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Trichlorofluoromethane	75-69-4				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	-	-	-	-	-	-	-	-	-
	1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Bromoform	75-25-2	0.1	1	300	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	Benzene	71-43-2	2	40	40	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Toluene	108-88-3	30	500	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Ethylbenzene	100-41-4	40	500	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Chloromethane	74-87-3				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	Bromomethane	74-83-9	0.5	0.5	30	mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	Chloroethane	75-00-3				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
	trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0021		0.0021
	1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
	p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
	o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Xylenes, Total	1330-20-7	400	100	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
	cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0044		0.0021
	1,2-Dichloroethene, Total	540-59-0				mg/kg	-	-	-	-	-	-	-	-	-
	Dibromomethane	74-95-3				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2,3-Trichloropropane	96-18-4				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Styrene	100-42-5	3	4	70	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Dichlorodifluoromethane	75-71-8				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	Acetone	67-64-1	6	50	400	mg/kg	0.19		0.085	U	0.16		0.083	U	0.1
	Carbon disulfide	75-15-0				mg/kg	0.0042	U	0.0051	U	0.0066	U	0.005	U	0.0062
	Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	0.028	U	0.034	U	0.044	U	0.033	U	0.041
	Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	0.014	U	0.017	U	0.022	U	0.017	U	0.021
	2-Hexanone	591-78-6				mg/kg	0.014	U	0.017	U	0.022	U	0.017	U	0.021
	Bromochloromethane	74-97-5				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Tetrahydrofuran	109-99-9				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	1,3-Dichloropropane	142-28-9				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Bromobenzene	108-86-1				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						LOCATION	WASH-MH212(E)-DC-VOC-1		WASH-MH212(F)-DC-VOC-1		WASH-MH212(G)-DC-VOC-1		Wash-MH186(A)-DC-VOC		Wash-MH186(B)-DC-VOC
						SAMPLING DATE	7/17/2020		7/17/2020		7/17/2020		8/7/2020		8/7/2020
						LAB SAMPLE ID	20G1126-05		20G1126-06		20G1126-07		20H0387-01		20H0387-02
						SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results
	o-Chlorotoluene	95-49-8				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	p-Chlorotoluene	106-43-4				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Naphthalene	91-20-3	4	20	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
	n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2,3-Trichlorobenzene	87-61-6				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
	Diethyl ether	60-29-7				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
	Diisopropyl Ether	108-20-3				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
	1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	0.07	U	0.085	U	0.11	U	0.083	U	0.1

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
U - Not detected at the reported detection limit for the sample.
- Not analyzed.
(1) - Value for C9-C10 aromatics used.
(2) -Value for 1,3-Dichloropropene used.
(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					LOCATION		Wash-MH186(C)-DC-VOC		WASH-MH119A-DC-VOC		WASH-MH119B-DC-VOC		WASH-MH119C-DC-VOC		WASH-MH281A-DC-VOC	
					SAMPLING DATE		8/7/2020		8/18/2020		8/18/2020		8/18/2020		8/18/2020	
					LAB SAMPLE ID		20H0387-03		L2033621-02		L2033621-03		L2033621-04		L2033621-06	
					SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL	
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																
Methylene chloride	75-09-2	0.1	4	400	mg/kg	U	0.011	U	0.0038	U	0.005	U	0.0042	U	0.0041	U
1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Chloroform	67-66-3	0.4	0.2	500	mg/kg	U	0.0046	U	0.0011	U	0.0015	U	0.0012	U	0.0012	U
Carbon tetrachloride	56-23-5	10	5	30	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	U	0.0011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Tetrachloroethene	127-18-4	1	10	30	mg/kg		0.010		0.0038		0.0066		0.003		0.0018	
Chlorobenzene	108-90-7	1	3	100	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Trichlorofluoromethane	75-69-4				mg/kg	U	0.011	U	0.003	U	0.004	U	0.0033	U	0.0033	U
1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	U	0.0011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	U	0.0011	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	-	-	-	0.00038	U	0.0005	U	0.00042	U	0.00041	U
1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Bromoform	75-25-2	0.1	1	300	mg/kg	U	0.0023	U	0.003	U	0.004	U	0.0033	U	0.0033	U
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	U	0.0011	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Benzene	71-43-2	2	40	40	mg/kg	U	0.0023	U	0.0007		0.0005	U	0.00045		0.00048	
Toluene	108-88-3	30	500	500	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Ethylbenzene	100-41-4	40	500	500	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Chloromethane	74-87-3				mg/kg	U	0.011	U	0.003	U	0.004	U	0.0033	U	0.0033	U
Bromomethane	74-83-9	0.5	0.5	30	mg/kg	U	0.011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	U	0.011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Chloroethane	75-00-3				mg/kg	U	0.011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	U	0.0046	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	U	0.0023	U	0.0011	U	0.0015	U	0.0012	U	0.0012	U
Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	U	0.0023	U	0.00062		0.00078		0.00042	U	0.00041	U
1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	U	0.0046	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	U	0.0046	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Xylenes, Total	1330-20-7	400	100	500	mg/kg	U	0.0046	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	U	0.0023	U	0.00077		0.001	U	0.00083	U	0.00083	U
1,2-Dichloroethene, Total	540-59-0				mg/kg	-	-	-	0.00077		0.001	U	0.00083	U	0.00083	U
Dibromomethane	74-95-3				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2,3-Trichloropropane	96-18-4				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Styrene	100-42-5	3	4	70	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Dichlorodifluoromethane	75-71-8				mg/kg	U	0.011	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Acetone	67-64-1	6	50	400	mg/kg	U	0.11	U	0.028		0.025	U	0.026		0.028	
Carbon disulfide	75-15-0				mg/kg	U	0.0069	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	U	0.046	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	U	0.023	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
2-Hexanone	591-78-6				mg/kg	U	0.023	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Bromochloromethane	74-97-5				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Tetrahydrofuran	109-99-9				mg/kg	U	0.011	U	0.003	U	0.004	U	0.0033	U	0.0033	U
2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	U	0.0011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,3-Dichloropropane	142-28-9				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Bromobenzene	108-86-1				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U

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Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

								Wash-MH186(C)-DC-VOC		WASH-MH119A-DC-VOC		WASH-MH119B-DC-VOC		WASH-MH119C-DC-VOC		WASH-MH281A-DC-VOC	
						LOCATION												
						SAMPLING DATE		8/7/2020		8/18/2020		8/18/2020		8/18/2020		8/18/2020	
						LAB SAMPLE ID		20H0387-03		L2033621-02		L2033621-03		L2033621-04		L2033621-06	
						SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL	
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
	o-Chlorotoluene	95-49-8				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	p-Chlorotoluene	106-43-4				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	U	0.0023	U	0.0023	U	0.003	U	0.0025	U	0.0025	U
	Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	U	0.0023	U	0.003	U	0.004	U	0.0033	U	0.0033	U
	Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
	p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
	Naphthalene	91-20-3	4	20	500	mg/kg	U	0.0046	U	0.003	U	0.004	U	0.0033	U	0.0033	U
	n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
	1,2,3-Trichlorobenzene	87-61-6				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	Diethyl ether	60-29-7				mg/kg	U	0.011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	Diisopropyl Ether	108-20-3				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
	1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	U	0.11	U	0.061	U	0.08	U	0.067	U	0.066	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
U - Not detected at the reported detection limit for the sample.
- Not analyzed.
(1) - Value for C9-C10 aromatics used.
(2) -Value for 1,3-Dichloropropene used.
(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						LOCATION	WASH-MH281B-DC-VOC		WASH-MH281C-DC-VOC		WASH-MH281D-DC-VOC	
						SAMPLING DATE	8/18/2020		8/18/2020		8/18/2020	
						LAB SAMPLE ID	L2033621-07		L2033621-08		L2033621-09	
						SAMPLE TYPE	SOIL		SOIL		SOIL	
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035												
	Methylene chloride	75-09-2	0.1	4	400	mg/kg	0.0044	U	0.0038	U	0.0041	U
	1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Chloroform	67-66-3	0.4	0.2	500	mg/kg	0.0013	U	0.0012	U	0.0012	U
	Carbon tetrachloride	56-23-5	10	5	30	mg/kg	0.00089	U	0.00077	U	0.00083	U
	1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	0.00089	U	0.00077	U	0.00083	U
	1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Tetrachloroethene	127-18-4	1	10	30	mg/kg	0.0013		0.0013		0.0014	
	Chlorobenzene	108-90-7	1	3	100	mg/kg	0.00044	U	0.00038	U	0.00041	U
	Trichlorofluoromethane	75-69-4				mg/kg	0.0036	U	0.0031	U	0.0033	U
	1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	0.00089	U	0.00077	U	0.00083	U
	1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	0.00044	U	0.00038	U	0.00041	U
	Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	0.00044	U	0.00038	U	0.00041	U
	trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	0.00044	U	0.00038	U	0.00041	U
	1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	0.00044	U	0.00038	U	0.00041	U
	1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	0.00044	U	0.00038	U	0.00041	U
	Bromoform	75-25-2	0.1	1	300	mg/kg	0.0036	U	0.0031	U	0.0033	U
	1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	0.00044	U	0.00038	U	0.00041	U
	Benzene	71-43-2	2	40	40	mg/kg	0.00066		0.00068		0.00054	
	Toluene	108-88-3	30	500	500	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Ethylbenzene	100-41-4	40	500	500	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Chloromethane	74-87-3				mg/kg	0.0036	U	0.0031	U	0.0033	U
	Bromomethane	74-83-9	0.5	0.5	30	mg/kg	0.0018	U	0.0015	U	0.0016	U
	Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Chloroethane	75-00-3				mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	0.00089	U	0.00077	U	0.00083	U
	trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	0.0013	U	0.0012	U	0.0012	U
	Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	0.00044	U	0.00038	U	0.00046	
	1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	0.0018	U	0.0015	U	0.0016	U
	Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	0.0018	U	0.0015	U	0.0016	U
	p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	0.0018	U	0.0015	U	0.0016	U
	o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Xylenes, Total	1330-20-7	400	100	500	mg/kg	0.00089	U	0.00077	U	0.00083	U
	cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	0.00089	U	0.00077	U	0.00083	U
	1,2-Dichloroethene, Total	540-59-0				mg/kg	0.00089	U	0.00077	U	0.00083	U
	Dibromomethane	74-95-3				mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,2,3-Trichloropropane	96-18-4				mg/kg	0.0018	U	0.0015	U	0.0016	U
	Styrene	100-42-5	3	4	70	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Dichlorodifluoromethane	75-71-8				mg/kg	0.0089	U	0.0077	U	0.0083	U
	Acetone	67-64-1	6	50	400	mg/kg	0.037		0.032		0.036	
	Carbon disulfide	75-15-0				mg/kg	0.0089	U	0.0077	U	0.0083	U
	Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	0.0089	U	0.0077	U	0.0083	U
	Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	0.0089	U	0.0077	U	0.0083	U
	2-Hexanone	591-78-6				mg/kg	0.0089	U	0.0077	U	0.0083	U
	Bromochloromethane	74-97-5				mg/kg	0.0018	U	0.0015	U	0.0016	U
	Tetrahydrofuran	109-99-9				mg/kg	0.0036	U	0.0031	U	0.0033	U
	2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	0.00089	U	0.00077	U	0.00083	U
	1,3-Dichloropropane	142-28-9				mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	0.00044	U	0.00038	U	0.00041	U
	Bromobenzene	108-86-1				mg/kg	0.0018	U	0.0015	U	0.0016	U
	n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	0.0018	U	0.0015	U	0.0016	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

							LOCATION	WASH-MH281B-DC-VOC		WASH-MH281C-DC-VOC		WASH-MH281D-DC-VOC	
							SAMPLING DATE	8/18/2020		8/18/2020		8/18/2020	
							LAB SAMPLE ID	L2033621-07		L2033621-08		L2033621-09	
							SAMPLE TYPE	SOIL		SOIL		SOIL	
		CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual
	o-Chlorotoluene	95-49-8				mg/kg	0.0018	U	0.0015	U	0.0016	U
	p-Chlorotoluene	106-43-4				mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	0.0027	U	0.0023	U	0.0025	U
	Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	0.0036	U	0.0031	U	0.0033	U
	Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	Naphthalene	91-20-3	4	20	500	mg/kg	0.0036	U	0.0031	U	0.0033	U
	n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U	0.00083	U
	1,2,3-Trichlorobenzene	87-61-6				mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	0.0018	U	0.0015	U	0.0016	U
	Diethyl ether	60-29-7				mg/kg	0.0018	U	0.0015	U	0.0016	U
	Diisopropyl Ether	108-20-3				mg/kg	0.0018	U	0.0015	U	0.0016	U
	Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	0.0018	U	0.0015	U	0.0016	U
	Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	0.0018	U	0.0015	U	0.0016	U
	1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	0.071	U	0.062	U	0.066	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
U - Not detected at the reported detection limit for the sample.
- Not analyzed.
(1) - Value for C9-C10 aromatics used.
(2) -Value for 1,3-Dichloropropene used.
(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLC-WASH(A)	GLC-WASH(B)	GLX-TPW-401	GLX-TPW-401A	GLX-TPW-402	GLX-TPW-402A	GLX-TPW-403	GLX-TPW-403A	GLX-TPW-404	GLX-TPW-405	GLX-TPW-406		GLX-TPW-407	GLX-TPW-408
						Sample Depth^:	N/A	N/A	0-3/3 ft	0-1 ft	0-6/4 ft	0-4 ft	0-3/3 ft	0-3 ft	0-3/2 ft	0-3/2 ft	0-2/1 ft	1 ft	0-5/3 ft	0-4/3 ft
						Sample Date:	02/25/2020	02/25/2020	11/06/2019	03/01/2020	11/06/2019	03/09/2020	11/06/2019	03/01/2020	02/25/2020	02/25/2020	02/26/2020	02/26/2020	02/26/2020	02/26/2020
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**												Low VOC	High VOC		
VOCs																				
	Methylene chloride	mg/kg	0.1	NS	NS	NA	NA	0.33 U	NA	0.3 U	NA	0.0089 U	NA	0.0036 U	0.0037 U	0.0040 U	0.22 U	0.0030 U	0.0045 U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Chloroform	mg/kg	0.2	NS	NS	NA	NA	0.098 U	NA	0.09 U	NA	0.0027 U	NA	0.0011 U	0.0011 U	0.0012 U	0.066 U	0.00091 U	0.0014 U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Tetrachloroethene	mg/kg	1	NS	NS	NA	NA	**0.041**	NA	**2**	NA	0.00089 U	NA	**0.012**	**0.0011**	**0.013**	**0.14**	**0.0096**	**0.14**
	Chlorobenzene	mg/kg	1	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.26 U	NA	0.24 U	NA	0.0071 U	NA	0.0028 U	0.0029 U	0.0032 U	0.18 U	0.0024 U	0.0036 U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	**0.0018**
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	Bromoform	mg/kg	0.1	NS	NS	NA	NA	0.26 U	NA	0.24 U	NA	0.0071 U	NA	0.0028 U	0.0029 U	0.0032 U	0.18 U	0.0024 U	0.0036 U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	Benzene	mg/kg	2	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	**0.021**
	Toluene	mg/kg	30	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	**0.0011**	0.044 U	0.00060 U	0.00090 U
	Ethylbenzene	mg/kg	40	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Chloromethane	mg/kg	100	NS	NS	NA	NA	0.26 U	NA	0.24 U	NA	0.0071 U	NA	0.0028 U	0.0029 U	0.0032 U	0.18 U	0.0024 U	0.0036 U
	Bromomethane	mg/kg	0.5	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	**0.0023**	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Chloroethane	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA	NA	0.098 U	NA	0.09 U	NA	0.0027 U	NA	0.0011 U	0.0011 U	0.0012 U	0.066 U	0.00091 U	0.0014 U
	Trichloroethene	mg/kg	0.3	NS	NS	NA	NA	0.033 U	NA	**0.032**	NA	0.00089 U	NA	**0.00050**	0.00037 U	**0.0011**	0.022 U	**0.00083**	**0.014**
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	p/m-Xylene	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	o-Xylene	mg/kg	100	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Xylenes (Total)	mg/kg	100	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	**0.0037**	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	**0.013**
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	**0.0037**	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	**0.013**
	Dibromomethane	mg/kg	500	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Styrene	mg/kg	3	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.65 U	NA	0.6 U	NA	0.018 U	NA	0.0071 U	0.0073 U	0.0080 U	0.44 U	0.0060 U	0.0090 U
	Acetone	mg/kg	6	NS	NS	NA	NA	0.65 U	NA	0.6 U	NA	0.044 U	NA	0.018 U	0.018 U	**0.31** **E**	0.44 U	**0.051**	0.022 U
	Carbon disulfide	mg/kg	100	NS	NS	NA	NA	0.65 U	NA	0.6 U	NA	0.018 U	NA	0.0071 U	0.0073 U	0.0080 U	0.44 U	0.0060 U	0.0090 U
	2-Butanone	mg/kg	4	NS	NS	NA	NA	0.65 U	NA	0.6 U	NA	0.018 U	NA	0.0071 U	0.0073 U	0.0080 U	0.44 U	0.0060 U	0.0090 U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	NA	NA	0.65 U	NA	0.6 U	NA	0.018 U	NA	0.0071 U	0.0073 U	0.0080 U	0.44 U	0.0060 U	0.0090 U
	2-Hexanone	mg/kg	100	NS	NS	NA	NA	0.65 U	NA	0.6 U	NA	0.018 U	NA	0.0071 U	0.0073 U	0.0080 U	0.44 U	0.0060 U	0.0090 U
	Bromochloromethane	mg/kg	NS	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA	NA	0.26 U	NA	0.24 U	NA	0.0071 U	NA	0.0028 U	0.0029 U	0.0032 U	0.18 U	0.0024 U	0.0036 U
	2,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA	NA	0.033 U	NA	0.03 U	NA	0.00089 U	NA	0.00036 U	0.00037 U	0.00040 U	0.022 U	0.00030 U	0.00045 U
	Bromobenzene	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	n-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	sec-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	p-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA	NA	0.2 U	NA	0.18 U	NA	0.0053 U	NA	0.0021 U	0.0022 U	0.0024 U	0.13 U	0.0018 U	0.0027 U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA	NA	0.26 U	NA	0.24 U	NA	0.0071 U	NA	0.0028 U	0.0029 U	0.0032 U	0.18 U	0.0024 U	0.0036 U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				**GLC-WASH(A)**		**GLC-WASH(B)**		**GLX-TPW-401**		**GLX-TPW-401A**		**GLX-TPW-402**		**GLX-TPW-402A**		**GLX-TPW-403**		**GLX-TPW-403A**		**GLX-TPW-404**		**GLX-TPW-405**		**GLX-TPW-406**				**GLX-TPW-407**		**GLX-TPW-408**	
		Sample Depth^:				N/A		N/A		0-3/3 ft		0-1 ft		0-6/4 ft		0-4 ft		0-3/3 ft		0-3 ft		0-3/2 ft		0-3/2 ft		0-2/1 ft		1 ft		0-5/3 ft		0-4/3 ft	
		Sample Date:				02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																					Low VOC		High VOC							
	Naphthalene	mg/kg	4	NS	NS	NA		NA		0.26	U	NA		0.24	U	NA		0.0071	U	NA		0.0028	U	0.0029	U	0.0032	U	0.18	U	0.0024	U	0.0036	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	Ethyl ether	mg/kg	100	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	Isopropyl Ether	mg/kg	100	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		NA		5.2	U	NA		4.8	U	NA		0.14	U	NA		0.057	U	0.059	U	0.064	U	3.5	U	0.048	U	0.072	U
	Total VOCs	mg/kg	N/A	4	10	*NA*		*NA*		***0.041***		*NA*		***2.03***		*NA*		***0.006***		*NA*		***0.013***		***0.001***		***0.325***		***0.140***		***0.061***		***0.190***	
SVOCs																																				
	Acenaphthene	mg/kg	4	NS	NS	1.4	U	**2**		NA		0.14	U	NA		0.15	U	NA		0.15	U	0.15	U	0.14	U	0.14	U	NA		0.14	U	**0.37**	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Azobenzene	mg/kg	NS	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Fluoranthene	mg/kg	1,000	NS	NS	**16**		**17**		NA		**0.12**		NA		**0.21**		NA		0.12	U	**0.55**		0.11	U	0.11	U	NA		0.1	U	**8.8**	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	1.9	U	2	U	NA		0.2	U	NA		0.2	U	NA		0.21	U	0.2	U	0.19	U	0.19	U	NA		0.18	U	0.2	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Hexachloroethane	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	Isophorone	mg/kg	100	NS	NS	1.6	U	1.6	U	NA		0.16	U	NA		0.16	U	NA		0.17	U	0.16	U	0.16	U	0.16	U	NA		0.15	U	0.17	U
	Naphthalene	mg/kg	4	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		**0.2**		0.18	U	0.18	U	0.18	U	NA		0.17	U	**0.68**	
	Nitrobenzene	mg/kg	500	NS	NS	1.6	U	1.6	U	NA		0.16	U	NA		0.16	U	NA		0.17	U	0.16	U	0.16	U	0.16	U	NA		0.15	U	0.17	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Butyl benzyl phthalate	mg/kg	100	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Di-n-butylphthalate	mg/kg	50	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Diethyl phthalate	mg/kg	10	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	Benzo(a)anthracene	mg/kg	7	NS	NS	**7**		**7.2**		NA		0.11	U	NA		**0.13**		NA		0.12	U	**0.36**		0.11	U	0.11	U	NA		0.1	U	**5.9**	
	Benzo(a)pyrene	mg/kg	2	NS	NS	**6.3**		**5.8**		NA		0.14	U	NA		0.15	U	NA		0.15	U	**0.45**		0.14	U	0.14	U	NA		0.14	U	**6.2**	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	**8.7**		**8.3**		NA		**0.11**		NA		**0.15**		NA		0.12	U	**0.6**		0.11	U	0.11	U	NA		0.1	U	**7.3**	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	**2.8**		**2.5**		NA		0.11	U	NA		0.11	U	NA		0.12	U	**0.18**		0.11	U	0.11	U	NA		0.1	U	**2.3**	
	Chrysene	mg/kg	70	NS	NS	**6.6**		**7.1**		NA		0.11	U	NA		**0.11**		NA		0.12	U	**0.4**		0.11	U	0.11	U	NA		0.1	U	**5.2**	
	Acenaphthylene	mg/kg	1	NS	NS	1.4	U	1.4	U	NA		0.14	U	NA		0.15	U	NA		0.15	U	**0.21**		0.14	U	0.14	U	NA		0.14	U	**0.88**	
	Anthracene	mg/kg	1,000	NS	NS	**3.5**		**4.2**		NA		0.11	U	NA		0.11	U	NA		0.12	U	**0.19**		0.11	U	0.11	U	NA		0.1	U	**1.9**	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	**4**		**3.1**		NA		0.14	U	NA		0.15	U	NA		0.15	U	**0.46**		0.14	U	0.14	U	NA		0.14	U	**3.4**	
	Fluorene	mg/kg	1,000	NS	NS	1.8	U	**2.2**		NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	**0.62**	
	Phenanthrene	mg/kg	10	NS	NS	**11**		**20**		NA		0.11	U	NA		0.11	U	NA		0.12	U	**0.3**		0.11	U	0.11	U	NA		0.1	U	**5.8**	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	**0.85**		**0.78**		NA		0.076	U	NA		0.077	U	NA		0.081	U	**0.094**		0.075	U	0.075	U	NA		0.072	U	**0.84**	
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	**4.2**		**3.4**		NA		0.14	U	NA		0.15	U	NA		0.15	U	**0.38**		0.14	U	0.14	U	NA		0.14	U	**3.8**	
	Pyrene	mg/kg	1,000	NS	NS	**13**		**15**		NA		**0.12**		NA		**0.2**		NA		**0.12**		**0.56**		0.11	U	0.11	U	NA		0.1	U	**7.6**	
	Aniline	mg/kg	1,000	NS	NS	2.2	U	2.2	U	NA		0.22	U	NA		0.22	U	NA		0.23	U	0.22	U	0.22	U	0.21	U	NA		0.2	U	0.23	U
	4-Chloroaniline	mg/kg	1	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Dibenzofuran	mg/kg	100	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	**0.48**	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	**0.16**		0.075	U	0.075	U	NA		0.072	U	**0.23**	
	Acetophenone	mg/kg	1,000	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.75	U	0.76	U	NA		0.076	U	NA		0.077	U	NA		0.081	U	0.077	U	0.075	U	0.075	U	NA		0.072	U	0.079	U
	2-Nitrophenol	mg/kg	100	NS	NS	3.9	U	3.9	U	NA		0.39	U	NA		0.39	U	NA		0.42	U	0.4	U	0.39	U	0.39	U	NA		0.37	U	0.41	U
	4-Nitrophenol	mg/kg	100	NS	NS	2.5	U	2.5	U	NA		0.25	U	NA		0.26	U	NA		0.27	U	0.26	U	0.25	U	0.25	U	NA		0.24	U	0.26	U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				**GLC-WASH(A)**		**GLC-WASH(B)**		**GLX-TPW-401**		**GLX-TPW-401A**		**GLX-TPW-402**		**GLX-TPW-402A**		**GLX-TPW-403**		**GLX-TPW-403A**		**GLX-TPW-404**		**GLX-TPW-405**		**GLX-TPW-406**			**GLX-TPW-407**		**GLX-TPW-408**	
		Sample Depth^:				N/A		N/A		0-3/3 ft		0-1 ft		0-6/4 ft		0-4 ft		0-3/3 ft		0-3 ft		0-3/2 ft		0-3/2 ft		0-2/1 ft		1 ft		0-5/3 ft		0-4/3 ft	
		Sample Date:				02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																					Low VOC		High VOC					
	2,4-Dinitrophenol	mg/kg	3	NS	NS	8.6	U	8.7	U	NA		0.87	U	NA		0.88	U	NA		0.93	U	0.88	U	0.86	U	0.86	U	NA		0.82	U	0.9	U
	Pentachlorophenol	mg/kg	3	NS	NS	3.6	U	3.6	U	NA		0.36	U	NA		0.36	U	NA		0.39	U	0.37	U	0.36	U	0.36	U	NA		0.34	U	0.38	U
	Phenol	mg/kg	1	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	2-Methylphenol	mg/kg	500	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	2.6	U	2.6	U	NA		0.26	U	NA		0.26	U	NA		0.28	U	0.26	U	0.26	U	0.26	U	NA		0.24	U	0.27	U
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Pyridine	mg/kg	500	NS	NS	1.9	U	2	U	NA		0.2	U	NA		0.2	U	NA		0.21	U	0.2	U	0.19	U	0.19	U	NA		0.18	U	0.2	U
	Total SVOCs	mg/kg	N/A	100	100	***84.0***		***98.6***		*NA*		***0.350***		*NA*		***0.80***		*NA*		***0.320***		***4.89***		*ND*		*ND*		*NA*		*ND*		***62.3***	
Pesticides																																	
	Delta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Lindane	mg/kg	0.003	NS	NS	NA		NA		NA		NA		NA		0.000566	U	NA		NA		0.000594	U	0.000573	U	0.000563	U	NA		0.000552	U	0.000590	U
	Alpha-BHC	mg/kg	50	NS	NS	NA		NA		NA		NA		NA		0.000707	U	NA		NA		0.000742	U	0.000716	U	0.000704	U	NA		0.000690	U	0.000738	U
	Beta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Heptachlor	mg/kg	0.3	NS	NS	NA		NA		NA		NA		NA		0.000849	U	NA		NA		0.000890	U	0.000859	U	0.000845	U	NA		0.000828	U	0.000885	U
	Aldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		NA		NA		NA		NA		0.00318	U	NA		NA		0.00334	U	0.00322	U	0.00317	U	NA		0.00310	U	0.00332	U
	Endrin	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.000707	U	NA		NA		0.000742	U	0.000716	U	0.000704	U	NA		0.000690	U	**0.00125**	**IP**
	Endrin ketone	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Dieldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		0.00106	U	NA		NA		0.00111	U	0.00107	U	0.00106	U	NA		0.00104	U	0.00111	U
	4,4'-DDE	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	4,4'-DDD	mg/kg	8	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	4,4'-DDT	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		0.00318	U	NA		NA		0.00334	U	0.00322	U	0.00317	U	NA		0.00310	U	0.00332	U
	Endosulfan I	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Endosulfan II	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		0.000707	U	NA		NA		0.000742	U	0.000716	U	0.000704	U	NA		0.000690	U	0.000738	U
	Methoxychlor	mg/kg	200	NS	NS	NA		NA		NA		NA		NA		0.00318	U	NA		NA		0.00334	U	0.00322	U	0.00317	U	NA		0.00310	U	0.00332	U
	Chlordane	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		0.0141	U	NA		NA		0.0148	U	0.0143	U	0.0141	U	NA		0.0138	U	0.0148	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
Herbicides																																	
	MCPP	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		3.7	U	NA		NA		3.7	U	3.6	U	3.6	U	NA		3.5	U	3.7	U
	MCPA	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		3.7	U	NA		NA		3.7	U	3.6	U	3.6	U	NA		3.5	U	3.7	U
	Dalapon	mg/kg	1,000	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	Dicamba	mg/kg	500	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	Dichloroprop	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4-D	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4-DB	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4,5-T	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
PCB Aroclors																																	
	Aroclor-1016	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1221	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1232	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1242	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1248	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1254	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1260	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1262	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1268	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	PCBs, Total	mg/kg	1	2	2	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
TPH																																	
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	**216**		**195**		NA		**114**		NA		**35.5**		NA		112	U	**122**		35.3	U	35.8	U	NA		34.1	U	**397**	
Metals, total																																	
	Antimony	mg/kg	20	NS	NS	**2.59**		**2.32**		2.10	U	NA		2.35	U	NA		2.40	U	NA		NA		NA		NA		NA		NA		NA	
	Arsenic	mg/kg	20	40	40	**8.13**		**9.58**		**2.31**		**4.02**		**14.3**		NA		**4.48**		**2.55**		**9.38**		**5.37**		**2.92**		NA		**1.42**		**6.77**	
	Barium	mg/kg	1,000	NS	NS	**26.6**		**48.5**		**14.9**		**24.6**		**35.9**		NA		**33.4**		**13.6**		**46.0**		**22.9**		**18.9**		NA		**11.6**		**26.9**	
	Beryllium	mg/kg	90	NS	NS	**0.231**		**0.276**		0.210	U	NA		**0.466**		NA		0.240	U	NA		NA		NA		NA		NA		NA		NA	
	Cadmium	mg/kg	70	30	80	**0.886**		**0.903**		**0.458**		**0.828**		**0.471**		NA		0.480	U	0.443	U	**1.03**		**0.435**		0.431	U	NA		**0.725**		**0.776**	
	Chromium	mg/kg	100	1,000	1,000	**10.4**		**14.2**		**6.72**		**11.9**		**34.4**		NA		**8.72**		**4.78**		**24.9**		**11.6**		**5.82**		NA		**11.7**		**13.8**	
	Lead	mg/kg	200	1,000	2,000	**96.4**		**198**		**6.31**		**31.7**		**75.0**		NA		**87.3**		**6.82**		**60.9**		**4.10**		**6.26**		NA		**2.32**		**129**	
	Mercury	mg/kg	20	10	10	**0.142**		**0.154**		NA		0.080	U	NA		0.082	U	NA		0.086	U	**0.10**		0.082	U	0.077	U	NA		0.079	U	**0.791**	
	Nickel	mg/kg	600	NS	NS	**8.94**		**10.7**		**5.46**		NA		**31.1**		NA		**6.52**		NA		NA		NA		NA		NA		NA		NA	
	Selenium	mg/kg	400	NS	NS	2.18	U	2.12	U	2.10	U	2.12	U	2.35	U	NA		2.40	U	2.21	U	2.12	U	2.13	U	2.15	U	NA		2.08	U	2.26	U
	Silver	mg/kg	100	NS	NS	0.437	U	0.424	U	0.420	U	0.425	U	0.471	U	NA		0.480	U	0.443	U	0.424	U	0.427	U	0.431	U	NA		0.416	U	0.451	U
	Thallium	mg/kg	8	NS	NS	2.18	U	2.12	U	2.10	U	NA		2.35	U	NA		2.40	U	NA		NA		NA		NA		NA		NA		NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					Sample Location:	**GLC-WASH(A)**		**GLC-WASH(B)**		**GLX-TPW-401**		**GLX-TPW-401A**		**GLX-TPW-402**		**GLX-TPW-402A**		**GLX-TPW-403**		**GLX-TPW-403A**		**GLX-TPW-404**		**GLX-TPW-405**		**GLX-TPW-406**				**GLX-TPW-407**		**GLX-TPW-408**	
					Sample Depth^:	N/A		N/A		0-3/3 ft		0-1 ft		0-6/4 ft		0-4 ft		0-3/3 ft		0-3 ft		0-3/2 ft		0-3/2 ft		0-2/1 ft		1 ft		0-5/3 ft		0-4/3 ft	
					Sample Date:	02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																					Low VOC		High VOC					
	Vanadium	mg/kg	400	NS	NS	**12.9**		**14.7**		**7.86**		NA		**32.7**		NA		**13.3**		NA		NA		NA		NA		NA		NA		NA	
	Zinc	mg/kg	1,000	NS	NS	**77.5**		**113**		**24.6**		NA		**127**		NA		**73.9**		NA		NA		NA		NA		NA		NA		NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:		GLC-WASH(A)		GLC-WASH(B)		GLX-TPW-401		GLX-TPW-401A		GLX-TPW-402		GLX-TPW-402A		GLX-TPW-403		GLX-TPW-403A		GLX-TPW-404		GLX-TPW-405		GLX-TPW-406				GLX-TPW-407		GLX-TPW-408	
						Sample Depth^:		N/A		N/A		0-3/3 ft		0-1 ft		0-6/4 ft		0-4 ft		0-3/3 ft		0-3 ft		0-3/2 ft		0-3/2 ft		0-2/1 ft		1 ft		0-5/3 ft		0-4/3 ft	
						Sample Date:		02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																							Low VOC		High VOC					
Metals, TCLP																																			
	Lead	mg/L	5*	NS	NS		NA		0.500	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.500	U
General Chemistry																																			
	Ignitability	none	NS	NS	NS		NI		NI		NA		NI		NA		NI		NA		NI		NI		NI		NI		NA		NI		NI	
	Specific conductance	umhos/cm	NS	4,000	8,000		**34**		**41**		NA		**160**		NA		**40**		NA		**84**		**81**		**60**		**120**		NA		**91**		**60**	
	pH	su	NS	>2 <12.5	>2 <12.5		**8.4**		**8.6**		**6.8**		**9.0**		**9.2**		**8.9**		**10.0**		**8.1**		**7.8**		**8.0**		**9.8**		NA		**9.8**		**8.5**	
	Reactive Cyanide	mg/kg	NS	< 250	< 250		10	U	10	U	NA		10	U	NA		10	U	NA		10	U	10	U	10	U	10	U	NA		10	U	10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500		10	U	10	U	NA		10	U	NA		10	U	NA		10	U	10	U	10	U	10	U	NA		10	U	10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:		GLX-TPW-409		GLX-TPW-410		GLX-TPW-411		GLX-TPW-412		GLX-TPW-601								GLX-TPW-602								GLX-TPW-603				
						Sample Depth^:		0-3/1.5-2 ft		0-5/1 ft		0-4/2-2.5 ft		0-2/1-2 ft		0-8 ft		0-2/2 ft		2-5/3 ft		5-8/6 ft		0-8 ft		0-2/2 ft		2-5/4.5 ft		5-8/6.5 ft		0-5 ft		0-2/1.5 ft		2-5/3 ft	
						Sample Date:		03/16/2020		02/26/2020		03/27/2020		03/01/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																
VOCs																																					
	Methylene chloride	mg/kg	0.1	NS	NS	0.2	U	0.0043	U	0.0025	U	0.32	U	NA		0.0035	U	0.54	U	0.0038	U	NA		0.28	U	2.4	U	0.0050	U	NA		0.0033	U	0.0033	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Chloroform	mg/kg	0.2	NS	NS	0.059	U	0.0013	U	0.00074	U	0.095	U	NA		0.001	U	0.16	U	0.0011	U	NA		0.084	U	0.71	U	0.0015	U	NA		0.0010	U	0.00098	U
	Carbon tetrachloride	mg/kg	5	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Tetrachloroethene	mg/kg	1	NS	NS	**1.1**		**0.014**		**0.0029**		0.032	U	NA		**0.0012**		**0.7**		0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Chlorobenzene	mg/kg	1	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA		0.0028	U	0.43	U	0.0030	U	NA		0.22	U	1.9	U	0.0040	U	NA		0.0027	U	0.0026	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	0.02	U	**0.00046**		0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Bromoform	mg/kg	0.1	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA		0.0028	U	0.43	U	0.0030	U	NA		0.22	U	1.9	U	0.0040	U	NA		0.0027	U	0.0026	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Benzene	mg/kg	2	NS	NS	0.02	U	0.00043	U	**0.0020**		0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		**0.044**		0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Toluene	mg/kg	30	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		**0.11**		0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Ethylbenzene	mg/kg	40	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Chloromethane	mg/kg	100	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA		0.0028	U	0.43	U	0.0030	U	NA		0.22	U	1.9	U	0.0040	U	NA		0.0027	U	0.0026	U
	Bromomethane	mg/kg	0.5	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Vinyl chloride	mg/kg	0.7	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Chloroethane	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	0.059	U	0.0013	U	0.00074	U	0.095	U	NA		0.001	U	0.16	U	0.0011	U	NA		0.084	U	0.71	U	0.0015	U	NA		0.0010	U	0.00098	U
	Trichloroethene	mg/kg	0.3	NS	NS	**0.05**		**0.0012**		0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	p/m-Xylene	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	o-Xylene	mg/kg	100	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		**0.078**		0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Xylenes (Total)	mg/kg	100	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		**0.078**		0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	0.039	U	**0.0013**		0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	0.039	U	**0.0013**		0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Dibromomethane	mg/kg	500	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Styrene	mg/kg	3	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	0.39	U	0.0087	U	0.0049	U	0.63	U	NA		0.007	U	1.1	U	0.0076	U	NA		0.56	U	4.7	U	0.01	U	NA		0.0066	U	0.0065	U
	Acetone	mg/kg	6	NS	NS	0.39	U	0.022	U	**0.11**		0.63	U	NA		**0.097**		1.1	U	**0.034**		NA		0.56	U	4.7	U	**0.11**		NA		**0.022**		**0.027**	
	Carbon disulfide	mg/kg	100	NS	NS	0.39	U	0.0087	U	0.0049	U	0.63	U	NA		0.007	U	1.1	U	0.0076	U	NA		0.56	U	4.7	U	0.01	U	NA		0.0066	U	0.0065	U
	2-Butanone	mg/kg	4	NS	NS	0.39	U	0.0087	U	**0.0055**		0.63	U	NA		0.007	U	1.1	U	0.0076	U	NA		0.56	U	4.7	U	0.01	U	NA		0.0066	U	0.0065	U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	0.39	U	0.0087	U	0.0049	U	0.63	U	NA		0.007	U	1.1	U	0.0076	U	NA		0.56	U	4.7	U	0.01	U	NA		0.0066	U	0.0065	U
	2-Hexanone	mg/kg	100	NS	NS	0.39	U	0.0087	U	0.0049	U	0.63	U	NA		0.007	U	1.1	U	0.0076	U	NA		0.56	U	4.7	U	0.01	U	NA		0.0066	U	0.0065	U
	Bromochloromethane	mg/kg	NS	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Tetrahydrofuran	mg/kg	500	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA		0.0028	U	0.43	U	0.0030	U	NA		0.22	U	1.9	U	0.0040	U	NA		0.0027	U	0.0026	U
	2,2-Dichloropropane	mg/kg	0.1	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA		0.00035	U	0.054	U	0.00038	U	NA		0.028	U	0.24	U	0.00050	U	NA		0.00033	U	0.00033	U
	Bromobenzene	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	n-Butylbenzene	mg/kg	100	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	sec-Butylbenzene	mg/kg	100	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	tert-Butylbenzene	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	o-Chlorotoluene	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	p-Chlorotoluene	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	0.12	U	0.0026	U	0.0015	U	0.19	U	NA		0.0021	U	0.33	U	0.0023	U	NA		0.17	U	1.4	U	0.0030	U	NA		0.0020	U	0.0020	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA		0.0028	U	0.43	U	0.0030	U	NA		0.22	U	1.9	U	0.0040	U	NA		0.0027	U	0.0026	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-409		GLX-TPW-410		GLX-TPW-411		GLX-TPW-412		GLX-TPW-601				GLX-TPW-602				GLX-TPW-603		
		Sample Depth^:				0-3/1.5-2 ft		0-5/1 ft		0-4/2-2.5 ft		0-2/1-2 ft		0-8 ft		0-2/2 ft		2-5/4.5 ft		5-8/6.5 ft		0-5 ft		0-2/1.5 ft		2-5/3 ft	
		Sample Date:				03/16/2020		02/26/2020		03/27/2020		03/01/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																						
	Naphthalene	mg/kg	4	NS	NS	0.16	U	0.0035	U	0.0020	U	**14**		NA		0.0028	U	0.43	U	0.0030	U	NA		**1**		**93**		0.0040	U	NA		0.0027	U	0.0026	U
	n-Propylbenzene	mg/kg	100	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA		0.0007	U	0.11	U	0.00076	U	NA		0.056	U	0.47	U	0.0010	U	NA		0.00066	U	0.00065	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	**1.2**		0.0020	U	NA		0.0013	U	0.0013	U
	Ethyl ether	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Isopropyl Ether	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA		0.0014	U	0.22	U	0.0015	U	NA		0.11	U	0.94	U	0.0020	U	NA		0.0013	U	0.0013	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	3.1	U	0.069	U	0.04	U	5.1	U	NA		0.056	U	8.7	U	0.061	U	NA		4.5	U	38	U	0.08	U	NA		0.053	U	0.052	U
	Total VOCs	mg/kg	N/A	4	10	***1.15***		***0.017***		***0.120***		***14***		*NA*		***0.098***		***0.70***		***0.034***		*NA*		***1.23***		***94.2***		***0.110***		*NA*		***0.022***		***0.027***	
SVOCs																																			
	Acenaphthene	mg/kg	4	NS	NS	**0.18**		0.15	U	0.74	U	**3.1**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Azobenzene	mg/kg	NS	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Fluoranthene	mg/kg	1,000	NS	NS	**4.3**		**0.2**		**20**		**9.9**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.2	U	0.2	U	1	U	0.37	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	0.17	U	0.84	U	0.31	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Naphthalene	mg/kg	4	NS	NS	**0.46**		0.19	U	**1.3**		**9.9**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	0.17	U	0.84	U	0.31	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	**2.2**		0.11	U	**10**		**4.1**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	**1.9**		0.15	U	**11**		**5**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	**2.2**		0.11	U	**14**		**5.3**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	**0.71**		0.11	U	**4.4**		**1.8**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Chrysene	mg/kg	70	NS	NS	**1.8**		0.11	U	**9.8**		**3.5**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Acenaphthylene	mg/kg	1	NS	NS	**0.25**		0.15	U	**1.6**		**1.2**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Anthracene	mg/kg	1,000	NS	NS	**0.87**		0.11	U	**2.1**		**4**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	**0.89**		0.15	U	**6.6**		**2.5**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Fluorene	mg/kg	1,000	NS	NS	**0.31**		0.19	U	0.93	U	**4**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Phenanthrene	mg/kg	10	NS	NS	**2.3**		**0.13**		**6.1**		**13**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	**0.24**		0.08	U	**1.5**		**0.56**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	**1**		0.15	U	**7.2**		**2.8**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Pyrene	mg/kg	1,000	NS	NS	**3.6**		**0.17**		**19**		**8.4**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Aniline	mg/kg	1,000	NS	NS	0.22	U	0.23	U	1.1	U	0.41	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dibenzofuran	mg/kg	100	NS	NS	**0.21**		0.19	U	0.93	U	**3.3**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	**0.15**		0.08	U	**0.49**		**3.1**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	0.19	U	0.93	U	0.34	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.077	U	0.08	U	0.39	U	0.14	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.39	U	0.41	U	2	U	0.74	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.26	U	0.26	U	1.3	U	0.48	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**	Sample Location:	GLX-TPW-409		GLX-TPW-410		GLX-TPW-411		GLX-TPW-412		GLX-TPW-601				GLX-TPW-602				GLX-TPW-603		
						Sample Depth^:	0-3/1.5-2 ft		0-5/1 ft		0-4/2-2.5 ft		0-2/1-2 ft		0-8 ft	0-2/2 ft	2-5/3 ft	5-8/6 ft	0-8 ft	0-2/2 ft	2-5/4.5 ft	5-8/6.5 ft	0-5 ft	0-2/1.5 ft	2-5/3 ft
						Sample Date:	03/16/2020		02/26/2020		03/27/2020		03/01/2020		10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019
	2,4-Dinitrophenol	mg/kg	3	NS	NS		0.88	U	0.91	U	4.4	U	1.6	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pentachlorophenol	mg/kg	3	NS	NS		0.36	U	0.38	U	1.8	U	0.68	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Phenol	mg/kg	1	NS	NS		0.18	U	0.19	U	0.93	U	0.34	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Methylphenol	mg/kg	500	NS	NS		0.18	U	0.19	U	0.93	U	0.34	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS		0.26	U	0.27	U	1.3	U	0.49	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS		0.18	U	0.19	U	0.93	U	0.34	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pyridine	mg/kg	500	NS	NS		0.2	U	0.2	U	1	U	0.37	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Total SVOCs	mg/kg	N/A	100	100		***23.6***		***0.50***		***115***		***85.5***		*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Pesticides																									
	Delta-BHC	mg/kg	10	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lindane	mg/kg	0.003	NS	NS		0.000581	U	0.000608	U	0.00290	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Alpha-BHC	mg/kg	50	NS	NS		0.000727	U	0.000760	U	0.00362	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Beta-BHC	mg/kg	10	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlor	mg/kg	0.3	NS	NS		0.000872	U	0.000912	U	0.00435	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aldrin	mg/kg	0.08	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlor epoxide	mg/kg	0.1	NS	NS		0.00327	U	0.00342	U	0.0163	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endrin	mg/kg	10	NS	NS		0.000727	U	0.000760	U	0.00362	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endrin ketone	mg/kg	10	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dieldrin	mg/kg	0.08	NS	NS		0.00109	U	0.00114	U	0.00544	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDE	mg/kg	6	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDD	mg/kg	8	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDT	mg/kg	6	NS	NS		0.00327	U	0.00342	U	**0.0320**		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan I	mg/kg	0.5	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan II	mg/kg	0.5	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan sulfate	mg/kg	0.5	NS	NS		0.000727	U	0.000760	U	0.00362	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methoxychlor	mg/kg	200	NS	NS		0.00327	U	0.00342	U	0.0163	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chlordane	mg/kg	0.7	NS	NS		0.0145	U	0.0152	U	**0.123**		NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.00174	U	0.00182	U	0.00870	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides																									
	MCPP	mg/kg	NS	NS	NS		3.6	U	3.8	U	3.7	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MCPA	mg/kg	100	NS	NS		3.6	U	3.8	U	3.7	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dalapon	mg/kg	1,000	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dicamba	mg/kg	500	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dichloroprop	mg/kg	NS	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-D	mg/kg	100	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-DB	mg/kg	100	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-T	mg/kg	100	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS		0.036	U	0.038	U	0.037	U	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB Aroclors																									
	Aroclor-1016	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1221	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1232	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1242	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1248	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1254	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1260	mg/kg	1	NS	NS		0.0355	U	0.0363	U	**0.0886**		0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1262	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	Aroclor-1268	mg/kg	1	NS	NS		0.0355	U	0.0363	U	0.0367	U	0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
	PCBs, Total	mg/kg	1	2	2		0.0355	U	0.0363	U	**0.0886**		0.0338	U	0.034	U	NA	NA	NA	0.036	U	NA	NA	0.034	U	NA	NA
TPH																									
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000		**527**		**110**		**1,450**		**308**		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, total																									
	Antimony	mg/kg	20	NS	NS		NA		NA		2.20	U	NA		2.10	U	NA	NA	NA	**3.16**		NA	NA	1.98	U	NA	NA
	Arsenic	mg/kg	20	40	40		**11.6**		**3.70**		**6.45**		**2.97**		**10.3**		NA	NA	NA	**17.3**		NA	NA	**24.9**		NA	NA
	Barium	mg/kg	1,000	NS	NS		**30.1**		**16.6**		**51.3**		**18.2**		**18.4**		NA	NA	NA	**27.2**		NA	NA	**16.8**		NA	NA
	Beryllium	mg/kg	90	NS	NS		NA		NA		**0.366**		NA		0.210	U	NA	NA	NA	0.210	U	NA	NA	0.198	U	NA	NA
	Cadmium	mg/kg	70	30	80		**1.20**		**0.598**		**0.555**		**0.537**		0.421	U	NA	NA	NA	**0.822**		NA	NA	0.397	U	NA	NA
	Chromium	mg/kg	100	1,000	1,000		**22.7**		**9.97**		**24.8**		**11.1**		**10.1**		NA	NA	NA	**13.6**		NA	NA	**8.27**		NA	NA
	Lead	mg/kg	200	1,000	2,000		**144**		**71.0**		**359**		**46.4**		**24.8**		NA	NA	NA	**56.6**		NA	NA	**21.6**		NA	NA
	Mercury	mg/kg	20	10	10		0.082	U	0.082	U	**0.175**		**0.140**		NA		NA	NA	NA	NA		NA	NA	NA		NA	NA
	Nickel	mg/kg	600	NS	NS		NA		NA		**16.2**		NA		**7.53**		NA	NA	NA	**11.0**		NA	NA	**6.64**		NA	NA
	Selenium	mg/kg	400	NS	NS		2.12	U	2.28	U	2.20	U	2.02	U	2.10	U	NA	NA	NA	2.10	U	NA	NA	1.98	U	NA	NA
	Silver	mg/kg	100	NS	NS		0.425	U	0.457	U	0.440	U	0.404	U	0.421	U	NA	NA	NA	0.420	U	NA	NA	0.397	U	NA	NA
	Thallium	mg/kg	8	NS	NS		NA		NA		2.20	U	NA		2.10	U	NA	NA	NA	2.10	U	NA	NA	1.98	U	NA	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

					Sample Location:	**GLX-TPW-409**		**GLX-TPW-410**		**GLX-TPW-411**		**GLX-TPW-412**		**GLX-TPW-601**				**GLX-TPW-602**				**GLX-TPW-603**		
					Sample Depth^:	0-3/1.5-2 ft		0-5/1 ft		0-4/2-2.5 ft		0-2/1-2 ft		0-8 ft	0-2/2 ft	2-5/3 ft	5-8/6 ft	0-8 ft	0-2/2 ft	2-5/4.5 ft	5-8/6.5 ft	0-5 ft	0-2/1.5 ft	2-5/3 ft
					Sample Date:	03/16/2020		02/26/2020		03/27/2020		03/01/2020		10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																			
	Vanadium	mg/kg	400	NS	NS	NA		NA		**24.4**		NA		**8.97**	NA	NA	NA	**15.8**	NA	NA	NA	**8.10**	NA	NA
	Zinc	mg/kg	1,000	NS	NS	NA		NA		**155**		NA		**99.2**	NA	NA	NA	**136**	NA	NA	NA	**25.3**	NA	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				**GLX-TPW-409**		**GLX-TPW-410**		**GLX-TPW-411**		**GLX-TPW-412**		**GLX-TPW-601**						**GLX-TPW-602**						**GLX-TPW-603**								
		Sample Depth^:				0-3/1.5-2 ft		0-5/1 ft		0-4/2-2.5 ft		0-2/1-2 ft		0-8 ft		0-2/2 ft		2-5/3 ft		0-8 ft		2-5/4.5 ft		2-5/6.5 ft		0-5 ft		0-2/1.5 ft		2-5/3 ft		
		Sample Date:				03/16/2020		02/26/2020		03/27/2020		03/01/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																											
Metals, TCLP																																
	Lead	mg/L	5*	NS	NS	0.500	U	NA		**1.09**		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
General Chemistry																																
	Ignitability	none	NS	NS	NS	NI		NI		NI		NI		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Specific conductance	umhos/cm	NS	4,000	8,000	**120**		**220**		**79**		**300**		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	pH	su	NS	>2 <12.5	>2 <12.5	**9.0**		**8.1**		**8.4**		**9.1**		NA		**7.1**		**6.7**		**6.9**		**7.6**		**7.6**		**6.9**		NA		**7.8**		**7.0**
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	10	U	10	U	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	10	U	10	U	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-603A	GLX-TPW-604			GLX-TPW-604A	GLX-TPW-605					GLX-TPW-605A	GLX-TPW-606		
						Sample Depth^:	0-5 ft	0-5 ft	0-2/1 ft	2-5/3 ft	0-5 ft	0-8 ft	0-2/1 ft	2-5/3 ft	3 ft	5-8/8 ft	0-8 ft	0-5 ft	0-2/1 ft	2-5/4 ft
						Sample Date:	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**										Field Dup					
VOCs																				
	Methylene chloride	mg/kg	0.1	NS	NS	NA	NA	0.0034 U	0.0045 U	NA	NA	0.0041 U	0.0047 U	0.0050 U	0.0036 U	NA	NA	0.0040 U	0.0024 U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Chloroform	mg/kg	0.2	NS	NS	NA	NA	0.0010 U	0.0013 U	NA	NA	0.0012 U	0.0014 U	0.0015 U	0.0011 U	NA	NA	0.0012 U	0.00072 U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Tetrachloroethene	mg/kg	1	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Chlorobenzene	mg/kg	1	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0027 U	0.0036 U	NA	NA	0.0032 U	0.0038 U	0.0040 U	0.0029 U	NA	NA	0.0032 U	0.0019 U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Bromoform	mg/kg	0.1	NS	NS	NA	NA	0.0027 U	0.0036 U	NA	NA	0.0032 U	0.0038 U	0.0040 U	0.0029 U	NA	NA	0.0032 U	0.0019 U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Benzene	mg/kg	2	NS	NS	NA	NA	0.00034 U	**0.00061**	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Toluene	mg/kg	30	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Ethylbenzene	mg/kg	40	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Chloromethane	mg/kg	100	NS	NS	NA	NA	0.0027 U	0.0036 U	NA	NA	0.0032 U	0.0038 U	0.0040 U	0.0029 U	NA	NA	0.0032 U	0.0019 U
	Bromomethane	mg/kg	0.5	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Chloroethane	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA	NA	0.0010 U	0.0013 U	NA	NA	0.0012 U	0.0014 U	0.0015 U	0.0011 U	NA	NA	0.0012 U	0.00072 U
	Trichloroethene	mg/kg	0.3	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	p/m-Xylene	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	o-Xylene	mg/kg	100	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Xylenes (Total)	mg/kg	100	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Dibromomethane	mg/kg	500	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	Styrene	mg/kg	3	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0068 U	0.0089 U	NA	NA	0.0081 U	0.0094 U	0.01 U	0.0072 U	NA	NA	0.0080 U	0.0048 U
	Acetone	mg/kg	6	NS	NS	NA	NA	**0.049**	**0.041**	NA	NA	**0.034**	**0.092**	**0.061**	0.018 U	NA	NA	**0.043**	**0.016**
	Carbon disulfide	mg/kg	100	NS	NS	NA	NA	0.0068 U	0.0089 U	NA	NA	0.0081 U	0.0094 U	0.01 U	0.0072 U	NA	NA	0.0080 U	0.0048 U
	2-Butanone	mg/kg	4	NS	NS	NA	NA	0.0068 U	0.0089 U	NA	NA	0.0081 U	0.0094 U	0.01 U	0.0072 U	NA	NA	0.0080 U	0.0048 U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	NA	NA	0.0068 U	0.0089 U	NA	NA	0.0081 U	0.0094 U	0.01 U	0.0072 U	NA	NA	0.0080 U	0.0048 U
	2-Hexanone	mg/kg	100	NS	NS	NA	NA	0.0068 U	0.0089 U	NA	NA	0.0081 U	0.0094 U	0.01 U	0.0072 U	NA	NA	0.0080 U	0.0048 U
	Bromochloromethane	mg/kg	NS	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA	NA	0.0027 U	0.0036 U	NA	NA	0.0032 U	0.0038 U	0.0040 U	0.0029 U	NA	NA	0.0032 U	0.0019 U
	2,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00034 U	0.00045 U	NA	NA	0.00041 U	0.00047 U	0.00050 U	0.00036 U	NA	NA	0.00040 U	0.00024 U
	Bromobenzene	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	n-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	sec-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	p-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.0014 U	0.0018 U	NA	NA	0.0016 U	0.0019 U	0.0020 U	0.0014 U	NA	NA	0.0016 U	0.00096 U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA	NA	0.0020 U	0.0027 U	NA	NA	0.0024 U	0.0028 U	0.0030 U	0.0022 U	NA	NA	0.0024 U	0.0014 U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA	NA	0.0027 U	0.0036 U	NA	NA	0.0032 U	0.0038 U	0.0040 U	0.0029 U	NA	NA	0.0032 U	0.0019 U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA	NA	0.00068 U	0.00089 U	NA	NA	0.00081 U	0.00094 U	0.0010 U	0.00072 U	NA	NA	0.00080 U	0.00048 U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-603A		GLX-TPW-604				GLX-TPW-604A		GLX-TPW-605						GLX-TPW-605A		GLX-TPW-606			
						Sample Depth^:	0-5 ft		0-5 ft		0-2/1 ft		2-5/3 ft		0-5 ft		0-8 ft		0-2/1 ft		2-5/3 ft		3 ft		5-8/8 ft		0-8 ft		0-5 ft		0-2/1 ft		2-5/4 ft	
						Sample Date:	02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019 Field Dup		10/20/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																													
	Naphthalene	mg/kg	4	NS	NS		NA		NA		0.0027	U	0.0036	U	NA		NA		0.0032	U	0.0038	U	0.0040	U	0.0029	U	NA		NA		0.0032	U	0.0019	U
	n-Propylbenzene	mg/kg	100	NS	NS		NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Ethyl ether	mg/kg	100	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Isopropyl Ether	mg/kg	100	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS		NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,4-Dioxane	mg/kg	0.2	NS	NS		NA		NA		0.054	U	0.072	U	NA		NA		0.065	U	0.075	U	0.08	U	0.057	U	NA		NA		0.064	U	0.038	U
	Total VOCs	mg/kg	N/A	4	10		*NA*		*NA*		***0.049***		***0.042***		*NA*		*NA*		***0.034***		***0.092***		***0.061***		*ND*		*NA*		*NA*		***0.043***		***0.016***	
SVOCs																																		
	Acenaphthene	mg/kg	4	NS	NS		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		**0.85**		NA		NA		NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Azobenzene	mg/kg	NS	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Fluoranthene	mg/kg	1,000	NS	NS		0.1	U	NA		NA		NA		**0.19**		NA		NA		NA		NA		NA		**6.6**		NA		NA		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS		0.18	U	NA		NA		NA		0.19	U	NA		NA		NA		NA		NA		0.2	U	NA		NA		NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Hexachloroethane	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Isophorone	mg/kg	100	NS	NS		0.15	U	NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		0.17	U	NA		NA		NA	
	Naphthalene	mg/kg	4	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		**0.56**		NA		NA		NA	
	Nitrobenzene	mg/kg	500	NS	NS		0.15	U	NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		0.17	U	NA		NA		NA	
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Diethyl phthalate	mg/kg	10	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS		0.1	U	NA		NA		NA		0.1	U	NA		NA		NA		NA		NA		**6.1**		NA		NA		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		**7.7**		NA		NA		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS		0.1	U	NA		NA		NA		**0.16**		NA		NA		NA		NA		NA		**12**		NA		NA		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS		0.1	U	NA		NA		NA		0.1	U	NA		NA		NA		NA		NA		**3.7**		NA		NA		NA	
	Chrysene	mg/kg	70	NS	NS		0.1	U	NA		NA		NA		**0.12**		NA		NA		NA		NA		NA		**11**		NA		NA		NA	
	Acenaphthylene	mg/kg	1	NS	NS		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		**0.35**		NA		NA		NA	
	Anthracene	mg/kg	1,000	NS	NS		0.1	U	NA		NA		NA		0.1	U	NA		NA		NA		NA		NA		**1.8**		NA		NA		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		**4.7**		NA		NA		NA	
	Fluorene	mg/kg	1,000	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		**0.86**		NA		NA		NA	
	Phenanthrene	mg/kg	10	NS	NS		0.1	U	NA		NA		NA		**0.14**		NA		NA		NA		NA		NA		**4.5**		NA		NA		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		**1.3**		NA		NA		NA	
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		**4.8**		NA		NA		NA	
	Pyrene	mg/kg	1,000	NS	NS		0.1	U	NA		NA		NA		**0.17**		NA		NA		NA		NA		NA		**6.6**		NA		NA		NA	
	Aniline	mg/kg	1,000	NS	NS		0.2	U	NA		NA		NA		0.21	U	NA		NA		NA		NA		NA		0.23	U	NA		NA		NA	
	4-Chloroaniline	mg/kg	1	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Dibenzofuran	mg/kg	100	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		**0.47**		NA		NA		NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		**0.29**		NA		NA		NA	
	Acetophenone	mg/kg	1,000	NS	NS		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS		0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2-Nitrophenol	mg/kg	100	NS	NS		0.37	U	NA		NA		NA		0.38	U	NA		NA		NA		NA		NA		0.41	U	NA		NA		NA	
	4-Nitrophenol	mg/kg	100	NS	NS		0.24	U	NA		NA		NA		0.25	U	NA		NA		NA		NA		NA		0.26	U	NA		NA		NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-603A		GLX-TPW-604			GLX-TPW-604A		GLX-TPW-605					GLX-TPW-605A		GLX-TPW-606		
						Sample Depth^:	0-5 ft		0-5 ft	0-2/1 ft	2-5/3 ft	0-5 ft		0-8 ft	0-2/1 ft	2-5/3 ft	3 ft	5-8/8 ft	0-8 ft		0-5 ft	0-2/1 ft	2-5/4 ft
						Sample Date:	02/08/2020		10/20/2019	10/20/2019	10/20/2019	02/08/2020		10/20/2019	10/20/2019	10/20/2019	10/20/2019 Field Dup	10/20/2019	02/08/2020		11/02/2019	11/02/2019	11/02/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																		
	2,4-Dinitrophenol	mg/kg	3	NS	NS		0.82	U	NA	NA	NA	0.85	U	NA	NA	NA	NA	NA	0.9	U	NA	NA	NA
	Pentachlorophenol	mg/kg	3	NS	NS		0.34	U	NA	NA	NA	0.35	U	NA	NA	NA	NA	NA	0.38	U	NA	NA	NA
	Phenol	mg/kg	1	NS	NS		0.17	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.19	U	NA	NA	NA
	2-Methylphenol	mg/kg	500	NS	NS		0.17	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.19	U	NA	NA	NA
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS		0.24	U	NA	NA	NA	0.25	U	NA	NA	NA	NA	NA	0.27	U	NA	NA	NA
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS		0.17	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.19	U	NA	NA	NA
	Pyridine	mg/kg	500	NS	NS		0.18	U	NA	NA	NA	0.19	U	NA	NA	NA	NA	NA	0.2	U	NA	NA	NA
	Total SVOCs	mg/kg	N/A	100	100		*ND*		*NA*	*NA*	*NA*	***0.780***		*NA*	*NA*	*NA*	*NA*	*NA*	***74.2***		*NA*	*NA*	*NA*
Pesticides																							
	Delta-BHC	mg/kg	10	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Lindane	mg/kg	0.003	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Alpha-BHC	mg/kg	50	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Beta-BHC	mg/kg	10	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Heptachlor	mg/kg	0.3	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Aldrin	mg/kg	0.08	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Heptachlor epoxide	mg/kg	0.1	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Endrin	mg/kg	10	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Endrin ketone	mg/kg	10	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Dieldrin	mg/kg	0.08	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	4,4'-DDE	mg/kg	6	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	4,4'-DDD	mg/kg	8	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	4,4'-DDT	mg/kg	6	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Endosulfan I	mg/kg	0.5	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Endosulfan II	mg/kg	0.5	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Endosulfan sulfate	mg/kg	0.5	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Methoxychlor	mg/kg	200	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Chlordane	mg/kg	0.7	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Hexachlorobenzene	mg/kg	0.7	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
Herbicides																							
	MCPP	mg/kg	NS	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	MCPA	mg/kg	100	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Dalapon	mg/kg	1,000	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Dicamba	mg/kg	500	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	Dichloroprop	mg/kg	NS	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	2,4-D	mg/kg	100	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	2,4-DB	mg/kg	100	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	2,4,5-T	mg/kg	100	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS		NA		NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		NA	NA	NA
PCB Aroclors																							
	Aroclor-1016	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1221	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1232	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1242	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1248	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1254	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1260	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1262	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	Aroclor-1268	mg/kg	1	NS	NS		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
	PCBs, Total	mg/kg	1	2	2		NA		0.035	U	NA	NA		NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA
TPH																							
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000		34	U	NA	NA	NA	**56.4**		NA	NA	NA	NA	NA	**390**		NA	NA	NA
Metals, total																							
	Antimony	mg/kg	20	NS	NS		NA		1.99	U	NA	NA		NA	NA	NA	NA	NA	NA		2.11	U	NA	NA
	Arsenic	mg/kg	20	40	40		NA		**10.5**		NA	NA		**6.98**		NA	NA	NA	NA		**6.58**		NA	NA
	Barium	mg/kg	1,000	NS	NS		NA		**28.7**		NA	NA		**29.3**		NA	NA	NA	NA		**35.6**		NA	NA
	Beryllium	mg/kg	90	NS	NS		NA		0.199	U	NA	NA		0.214	U	NA	NA	NA	NA		0.211	U	NA	NA
	Cadmium	mg/kg	70	30	80		NA		0.399	U	NA	NA		0.428	U	NA	NA	NA	NA		0.422	U	NA	NA
	Chromium	mg/kg	100	1,000	1,000		NA		**15.0**		NA	NA		**15.3**		NA	NA	NA	NA		**15.2**		NA	NA
	Lead	mg/kg	200	1,000	2,000		NA		**14.3**		NA	NA		**15.4**		NA	NA	NA	NA		**25.6**		NA	NA
	Mercury	mg/kg	20	10	10		0.079	U	NA		NA	0.074	U	NA		NA	NA	NA	**0.088**		NA		NA	NA
	Nickel	mg/kg	600	NS	NS		NA		**9.62**		NA	NA		**9.41**		NA	NA	NA	NA		**11.2**		NA	NA
	Selenium	mg/kg	400	NS	NS		NA		1.99	U	NA	NA		2.14	U	NA	NA	NA	NA		2.11	U	NA	NA
	Silver	mg/kg	100	NS	NS		NA		0.399	U	NA	NA		0.428	U	NA	NA	NA	NA		0.422	U	NA	NA
	Thallium	mg/kg	8	NS	NS		NA		1.99	U	NA	NA		2.14	U	NA	NA	NA	NA		2.11	U	NA	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-603A	GLX-TPW-604			GLX-TPW-604A	GLX-TPW-605					GLX-TPW-605A	GLX-TPW-606		
						Sample Depth^:	0-5 ft	0-5 ft	0-2/1 ft	2-5/3 ft	0-5 ft	0-8 ft	0-2/1 ft	2-5/3 ft	3 ft	5-8/8 ft	0-8 ft	0-5 ft	0-2/1 ft	2-5/4 ft
						Sample Date:	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**										Field Dup					
	Vanadium	mg/kg	400	NS	NS		NA	**12.0**	NA	NA	NA	**14.2**	NA	NA	NA	NA	NA	**17.5**	NA	NA
	Zinc	mg/kg	1,000	NS	NS		NA	**33.3**	NA	NA	NA	**38.5**	NA	NA	NA	NA	NA	**35.5**	NA	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				**GLX-TPW-603A**		**GLX-TPW-604**				**GLX-TPW-604A**		**GLX-TPW-605**						**GLX-TPW-605A**		**GLX-TPW-606**			
		Sample Depth^:				0-5 ft		0-5 ft		0-2/1 ft		2-5/3 ft		0-5 ft		0-8 ft		0-2/1 ft		2-5/3 ft		3 ft		5-8/8 ft		0-8 ft		0-5 ft		0-2/1 ft		2-5/4 ft	
		Sample Date:				02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																	Field Dup											
Metals, TCLP																																	
	Lead	mg/L	5*	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
General Chemistry																																	
	Ignitability	none	NS	NS	NS	NI		NA		NA		NA		NI		NA		NA		NA		NA		NA		NI		NA		NA		NA	
	Specific conductance	umhos/cm	NS	4,000	8,000	**13**		NA		NA		NA		**11**		NA		NA		NA		NA		NA		**13**		NA		NA		NA	
	pH	su	NS	>2 <12.5	>2 <12.5	**7.7**		NA		**7.5**		**6.8**		**6.9**		NA		**7.5**		**6.6**		NA		**5.5**		**7.2**		NA		**6.8**		**6.4**	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	NA		NA		NA		10	U	NA		NA		NA		NA		NA		10	U	NA		NA		NA	
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	NA		NA		NA		10	U	NA		NA		NA		NA		NA		10	U	NA		NA		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-606A	GLX-TPW-607			GLX-TPW-607A		GLX-TPW-608			GLX-TPW-608A	GLX-TPW-609			GLX-TPW-609A
						Sample Depth^:	0-5 ft	0-5 ft	0-2/0.6 ft	2-5/4.6 ft	0-5 ft	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	0-5 ft
						Sample Date:	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	02/08/2020 Field Dup	11/02/2019	11/02/2019	11/02/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**															
VOCs																				
	Methylene chloride	mg/kg	0.1	NS	NS	NA	NA	0.0038 U	0.0039 U	NA	NA	NA	0.0035 U	0.0047 U	NA	NA	0.0034 U	0.0032 U	NA
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Chloroform	mg/kg	0.2	NS	NS	NA	NA	0.0011 U	0.0012 U	NA	NA	NA	0.0011 U	0.0014 U	NA	NA	0.001 U	0.00096 U	NA
	Carbon tetrachloride	mg/kg	5	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Tetrachloroethene	mg/kg	1	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Chlorobenzene	mg/kg	1	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0030 U	0.0031 U	NA	NA	NA	0.0028 U	0.0037 U	NA	NA	0.0027 U	0.0026 U	NA
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Bromoform	mg/kg	0.1	NS	NS	NA	NA	0.0030 U	0.0031 U	NA	NA	NA	0.0028 U	0.0037 U	NA	NA	0.0027 U	0.0026 U	NA
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Benzene	mg/kg	2	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Toluene	mg/kg	30	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Ethylbenzene	mg/kg	40	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Chloromethane	mg/kg	100	NS	NS	NA	NA	0.0030 U	0.0031 U	NA	NA	NA	0.0028 U	0.0037 U	NA	NA	0.0027 U	0.0026 U	NA
	Bromomethane	mg/kg	0.5	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	Vinyl chloride	mg/kg	0.7	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Chloroethane	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA	NA	0.0011 U	0.0012 U	NA	NA	NA	0.0011 U	0.0014 U	NA	NA	0.001 U	0.00096 U	NA
	Trichloroethene	mg/kg	0.3	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	p/m-Xylene	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	o-Xylene	mg/kg	100	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Xylenes (Total)	mg/kg	100	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Dibromomethane	mg/kg	500	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	Styrene	mg/kg	3	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0075 U	0.0078 U	NA	NA	NA	0.0071 U	0.0094 U	NA	NA	0.0069 U	0.0064 U	NA
	Acetone	mg/kg	6	NS	NS	NA	NA	**0.066**	**0.03**	NA	NA	NA	**0.02**	**0.053**	NA	NA	**0.07**	**0.092**	NA
	Carbon disulfide	mg/kg	100	NS	NS	NA	NA	0.0075 U	0.0078 U	NA	NA	NA	0.0071 U	0.0094 U	NA	NA	0.0069 U	0.0064 U	NA
	2-Butanone	mg/kg	4	NS	NS	NA	NA	0.0075 U	0.0078 U	NA	NA	NA	0.0071 U	0.0094 U	NA	NA	0.0069 U	0.0064 U	NA
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	NA	NA	0.0075 U	0.0078 U	NA	NA	NA	0.0071 U	0.0094 U	NA	NA	0.0069 U	0.0064 U	NA
	2-Hexanone	mg/kg	100	NS	NS	NA	NA	0.0075 U	0.0078 U	NA	NA	NA	0.0071 U	0.0094 U	NA	NA	0.0069 U	0.0064 U	NA
	Bromochloromethane	mg/kg	NS	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	Tetrahydrofuran	mg/kg	500	NS	NS	NA	NA	0.0030 U	0.0031 U	NA	NA	NA	0.0028 U	0.0037 U	NA	NA	0.0027 U	0.0026 U	NA
	2,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00038 U	0.00039 U	NA	NA	NA	0.00035 U	0.00047 U	NA	NA	0.00034 U	0.00032 U	NA
	Bromobenzene	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	n-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	sec-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	tert-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	o-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	p-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.0015 U	0.0016 U	NA	NA	NA	0.0014 U	0.0019 U	NA	NA	0.0014 U	0.0013 U	NA
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA	NA	0.0022 U	0.0024 U	NA	NA	NA	0.0021 U	0.0028 U	NA	NA	0.0021 U	0.0019 U	NA
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA	NA	0.0030 U	0.0031 U	NA	NA	NA	0.0028 U	0.0037 U	NA	NA	0.0027 U	0.0026 U	NA
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA	NA	0.00075 U	0.00078 U	NA	NA	NA	0.00071 U	0.00094 U	NA	NA	0.00069 U	0.00064 U	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-606A		GLX-TPW-607				GLX-TPW-607A				GLX-TPW-608				GLX-TPW-608A		GLX-TPW-609				GLX-TPW-609A	
						Sample Depth^:	0-5 ft		0-5 ft		0-2/0.6 ft		2-5/4.6 ft		0-5 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft	
						Sample Date:	02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		02/08/2020 Field Dup		11/02/2019		11/02/2019		11/02/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																											
	Naphthalene	mg/kg	4	NS	NS		NA		NA		0.0030	U	0.0031	U	NA		NA		NA		0.0028	U	0.0037	U	NA		NA		0.0027	U	0.0026	U	NA	
	n-Propylbenzene	mg/kg	100	NS	NS		NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	Ethyl ether	mg/kg	100	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	Isopropyl Ether	mg/kg	100	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS		NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,4-Dioxane	mg/kg	0.2	NS	NS		NA		NA		0.06	U	0.063	U	NA		NA		NA		0.057	U	0.075	U	NA		NA		0.055	U	0.051	U	NA	
	Total VOCs	mg/kg	N/A	4	10		*NA*		*NA*		***0.066***		***0.030***		*NA*		*NA*		*NA*		***0.020***		***0.053***		*NA*		*NA*		***0.070***		***0.092***		*NA*	
SVOCs																																		
	Acenaphthene	mg/kg	4	NS	NS		**0.2**		NA		NA		NA		0.15	U	0.15	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Azobenzene	mg/kg	NS	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Fluoranthene	mg/kg	1,000	NS	NS		**1.7**		NA		NA		NA		**29**		**86**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS		0.19	U	NA		NA		NA		0.21	U	0.2	U	NA		NA		NA		0.19	U	NA		NA		NA		0.19	U
	Hexachlorobutadiene	mg/kg	30	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Hexachloroethane	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	Isophorone	mg/kg	100	NS	NS		0.16	U	NA		NA		NA		0.17	U	0.17	U	NA		NA		NA		0.16	U	NA		NA		NA		0.16	U
	Naphthalene	mg/kg	4	NS	NS		**0.33**		NA		NA		NA		**0.3**		**0.92**		NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Nitrobenzene	mg/kg	500	NS	NS		0.16	U	NA		NA		NA		0.17	U	0.17	U	NA		NA		NA		0.16	U	NA		NA		NA		0.16	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Butyl benzyl phthalate	mg/kg	100	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Di-n-butylphthalate	mg/kg	50	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Diethyl phthalate	mg/kg	10	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Dimethyl phthalate	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	Benzo(a)anthracene	mg/kg	7	NS	NS		**0.64**		NA		NA		NA		**16**		**48**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Benzo(a)pyrene	mg/kg	2	NS	NS		**0.64**		NA		NA		NA		**16**		**44**		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U
	Benzo(b)fluoranthene	mg/kg	7	NS	NS		**0.72**		NA		NA		NA		**17**		**50**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Benzo(k)fluoranthene	mg/kg	70	NS	NS		**0.25**		NA		NA		NA		**4.9**		**16**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Chrysene	mg/kg	70	NS	NS		**0.57**		NA		NA		NA		**12**		**37**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Acenaphthylene	mg/kg	1	NS	NS		0.14	U	NA		NA		NA		**0.84**		**2.7**		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U
	Anthracene	mg/kg	1,000	NS	NS		**0.45**		NA		NA		NA		**2.2**		**9.7**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS		**0.33**		NA		NA		NA		**6.1**		**20**		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U
	Fluorene	mg/kg	1,000	NS	NS		**0.23**		NA		NA		NA		0.19	U	**0.61**		NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Phenanthrene	mg/kg	10	NS	NS		**1.9**		NA		NA		NA		**1.8**		**6.5**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS		**0.074**		NA		NA		NA		**1.9**		**5.3**		NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS		**0.38**		NA		NA		NA		**7.7**		**23**		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U
	Pyrene	mg/kg	1,000	NS	NS		**1.4**		NA		NA		NA		**24**		**73**		NA		NA		NA		0.11	U	NA		NA		NA		0.11	U
	Aniline	mg/kg	1,000	NS	NS		0.21	U	NA		NA		NA		0.23	U	0.22	U	NA		NA		NA		0.21	U	NA		NA		NA		0.21	U
	4-Chloroaniline	mg/kg	1	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	Dibenzofuran	mg/kg	100	NS	NS		**0.24**		NA		NA		NA		0.19	U	**0.23**		NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	2-Methylnaphthalene	mg/kg	0.7	NS	NS		**0.16**		NA		NA		NA		0.08	U	**0.21**		NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	Acetophenone	mg/kg	1,000	NS	NS		0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	2-Chlorophenol	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS		0.074	U	NA		NA		NA		0.08	U	0.078	U	NA		NA		NA		0.075	U	NA		NA		NA		0.075	U
	2-Nitrophenol	mg/kg	100	NS	NS		0.38	U	NA		NA		NA		0.41	U	0.4	U	NA		NA		NA		0.39	U	NA		NA		NA		0.39	U
	4-Nitrophenol	mg/kg	100	NS	NS		0.25	U	NA		NA		NA		0.27	U	0.26	U	NA		NA		NA		0.25	U	NA		NA		NA		0.25	U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-606A		GLX-TPW-607						GLX-TPW-607A				GLX-TPW-608						GLX-TPW-608A		GLX-TPW-609								GLX-TPW-609A		
		Sample Depth^:				0-5 ft		0-5 ft		0-2/0.6 ft		2-5/4.6 ft		0-5 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft		
		Sample Date:				02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020		
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**											Field Dup																			
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.85	U	NA		NA		NA		0.92	U	0.89	U	NA		NA		NA		0.86	U	NA		NA		NA		0.86	U	
	Pentachlorophenol	mg/kg	3	NS	NS	0.36	U	NA		NA		NA		0.38	U	0.37	U	NA		NA		NA		0.36	U	NA		NA		NA		0.36	U	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		NA		NA		**0.21**		**0.5**		NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	0.26	U	NA		NA		NA		0.28	U	**0.33**		NA		NA		NA		0.26	U	NA		NA		NA		0.26	U	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	
	Pyridine	mg/kg	500	NS	NS	0.19	U	NA		NA		NA		0.21	U	0.2	U	NA		NA		NA		0.19	U	NA		NA		NA		0.19	U	
	Total SVOCs	mg/kg	N/A	100	100	***10.2***		*NA*		*NA*		*NA*		***140***		***424***		*NA*		*NA*		*NA*		*ND*		*NA*		*NA*		*NA*		*ND*		
Pesticides																																				
	Delta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Lindane	mg/kg	0.003	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Alpha-BHC	mg/kg	50	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Beta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Heptachlor	mg/kg	0.3	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Aldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Endrin	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Endrin ketone	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Dieldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	4,4'-DDE	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	4,4'-DDD	mg/kg	8	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	4,4'-DDT	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Endosulfan I	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Endosulfan II	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Methoxychlor	mg/kg	200	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Chlordane	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
Herbicides																																				
	MCPP	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	MCPA	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Dalapon	mg/kg	1,000	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Dicamba	mg/kg	500	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Dichloroprop	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	2,4-D	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	2,4-DB	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	2,4,5-T	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
PCB Aroclors																																				
	Aroclor-1016	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1221	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1232	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1242	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1248	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1254	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1260	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1262	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	Aroclor-1268	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
	PCBs, Total	mg/kg	1	2	2	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		0.0351	U	NA		NA		NA		NA		
TPH																																				
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	**52.7**		NA		NA		NA		**341**		**548**		NA		NA		NA		34.7	U	NA		NA		NA		35.9	U	
Metals, total																																				
	Antimony	mg/kg	20	NS	NS	NA		2.09	U	NA		NA		NA		NA		2.18	U	NA		NA		2.08	U	NA		NA		NA		NA		
	Arsenic	mg/kg	20	40	40	NA		**8.05**		NA		NA		NA		NA		**4.94**		NA		NA		**5.05**		NA		NA		NA		NA		
	Barium	mg/kg	1,000	NS	NS	NA		**23.7**		NA		NA		NA		NA		**17.0**		NA		NA		**23.3**		NA		NA		NA		NA		
	Beryllium	mg/kg	90	NS	NS	NA		0.209	U	NA		NA		NA		NA		0.218	U	NA		NA		0.208	U	NA		NA		NA		NA		
	Cadmium	mg/kg	70	30	80	NA		0.418	U	NA		NA		NA		NA		0.435	U	NA		NA		**0.429**		NA		NA		NA		NA		
	Chromium	mg/kg	100	1,000	1,000	NA		**11.8**		NA		NA		NA		NA		**10.6**		NA		NA		**15.3**		NA		NA		NA		NA		
	Lead	mg/kg	200	1,000	2,000	NA		**38.0**		NA		NA		NA		NA		**7.93**		NA		NA		**34.1**		NA		NA		NA		NA		
	Mercury	mg/kg	20	10	10	**0.127**		NA		NA		NA		0.079	U	0.091	U	NA		NA		NA		0.079	U	NA		NA		NA		0.077	U	
	Nickel	mg/kg	600	NS	NS	NA		**9.83**		NA		NA		NA		NA		**6.78**		NA		NA		**9.54**		NA		NA		NA		NA		
	Selenium	mg/kg	400	NS	NS	NA		2.09	U	NA		NA		NA		NA		2.18	U	NA		NA		2.08	U	NA		NA		NA		NA		
	Silver	mg/kg	100	NS	NS	NA		0.418	U	NA		NA		NA		NA		0.435	U	NA		NA		0.416	U	NA		NA		NA		NA		
	Thallium	mg/kg	8	NS	NS	NA		2.09	U	NA		NA		NA		NA		2.18	U	NA		NA		2.08	U	NA		NA		NA		NA		

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-606A	GLX-TPW-607			GLX-TPW-607A		GLX-TPW-608			GLX-TPW-608A	GLX-TPW-609			GLX-TPW-609A
						Sample Depth^:	0-5 ft	0-5 ft	0-2/0.6 ft	2-5/4.6 ft	0-5 ft	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	0-5 ft
						Sample Date:	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**							Field Dup								
	Vanadium	mg/kg	400	NS	NS		NA	**21.9**	NA	NA	NA	NA	**12.4**	NA	NA	NA	**20.3**	NA	NA	NA
	Zinc	mg/kg	1,000	NS	NS		NA	**99.7**	NA	NA	NA	NA	**26.9**	NA	NA	NA	**40.6**	NA	NA	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-606A		GLX-TPW-607				GLX-TPW-607A				GLX-TPW-608				GLX-TPW-608A		GLX-TPW-609				GLX-TPW-609A	
		Sample Depth^:				0-5 ft		0-5 ft		0-2/0.6 ft		2-5/4.6 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft	
		Sample Date:				02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**											Field Dup															
Metals, TCLP																															
	Lead	mg/L	5*	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
General Chemistry																															
	Ignitability	none	NS	NS	NS	NI		NA		NA		NA		NI		NI		NA		NA		NI		NA		NA		NA		NI	
	Specific conductance	umhos/cm	NS	4,000	8,000	**10**		NA		NA		NA		**12**		**13**		NA		NA		NA		10	U	NA		NA		NA		10	U
	pH	su	NS	>2 <12.5	>2 <12.5	**7.6**		NA		**7.8**		**6.9**		**6.8**		**7.2**		NA		**7.0**		**6.3**		**7.5**		NA		**7.2**		**7.1**		**7.5**	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	NA		NA		NA		10	U	10	U	NA		NA		NA		10	U	NA		NA		NA		10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	NA		NA		NA		10	U	10	U	NA		NA		NA		10	U	NA		NA		NA		10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-610				GLX-TPW-610A	GLX-TPW-611			GLX-TPW-611A	GLX-TPW-612			GLX-TPW-612A	GLX-TPW-613		
		Sample Depth^:				0-8 ft	0-2/1 ft	2-5/3 ft	5-8/7 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft
		Sample Date:				11/02/2019	11/02/2019	11/02/2019	11/02/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																
VOCs																					
	Methylene chloride	mg/kg	0.1	NS	NS	NA	0.0038 U	0.0024 U	0.0030 U	NA	NA	0.0049 U	0.0037 U	NA	NA	0.0042 U	0.0038 U	NA	NA	0.0034 U	0.0049 U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Chloroform	mg/kg	0.2	NS	NS	NA	0.0011 U	0.00071 U	0.00091 U	NA	NA	0.0015 U	0.0011 U	NA	NA	0.0013 U	0.0011 U	NA	NA	0.0010 U	0.0015 U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Tetrachloroethene	mg/kg	1	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Chlorobenzene	mg/kg	1	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA	0.003 U	0.0019 U	0.0024 U	NA	NA	0.0039 U	0.0030 U	NA	NA	0.0034 U	0.0030 U	NA	NA	0.0027 U	0.0039 U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Bromoform	mg/kg	0.1	NS	NS	NA	0.003 U	0.0019 U	0.0024 U	NA	NA	0.0039 U	0.0030 U	NA	NA	0.0034 U	0.0030 U	NA	NA	0.0027 U	0.0039 U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Benzene	mg/kg	2	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Toluene	mg/kg	30	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Ethylbenzene	mg/kg	40	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Chloromethane	mg/kg	100	NS	NS	NA	0.003 U	0.0019 U	0.0024 U	NA	NA	0.0039 U	0.0030 U	NA	NA	0.0034 U	0.0030 U	NA	NA	0.0027 U	0.0039 U
	Bromomethane	mg/kg	0.5	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Chloroethane	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA	0.0011 U	0.00071 U	0.00091 U	NA	NA	0.0015 U	0.0011 U	NA	NA	0.0013 U	0.0011 U	NA	NA	0.0010 U	0.0015 U
	Trichloroethene	mg/kg	0.3	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	p/m-Xylene	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	o-Xylene	mg/kg	100	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Xylenes (Total)	mg/kg	100	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Dibromomethane	mg/kg	500	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	Styrene	mg/kg	3	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA	0.0076 U	0.0048 U	0.0061 U	NA	NA	0.0098 U	0.0074 U	NA	NA	0.0084 U	0.0076 U	NA	NA	0.0068 U	0.0098 U
	Acetone	mg/kg	6	NS	NS	NA	**0.18**	**0.018**	**0.035**	NA	NA	**0.091**	**0.028**	NA	NA	**0.08**	**0.059**	NA	NA	**0.028**	**0.032**
	Carbon disulfide	mg/kg	100	NS	NS	NA	0.0076 U	0.0048 U	0.0061 U	NA	NA	0.0098 U	0.0074 U	NA	NA	0.0084 U	0.0076 U	NA	NA	0.0068 U	0.0098 U
	2-Butanone	mg/kg	4	NS	NS	NA	**0.018**	0.0048 U	0.0061 U	NA	NA	0.0098 U	0.0074 U	NA	NA	0.0084 U	0.0076 U	NA	NA	0.0068 U	0.0098 U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	NA	0.0076 U	0.0048 U	0.0061 U	NA	NA	0.0098 U	0.0074 U	NA	NA	0.0084 U	0.0076 U	NA	NA	0.0068 U	0.0098 U
	2-Hexanone	mg/kg	100	NS	NS	NA	0.0076 U	0.0048 U	0.0061 U	NA	NA	0.0098 U	0.0074 U	NA	NA	0.0084 U	0.0076 U	NA	NA	0.0068 U	0.0098 U
	Bromochloromethane	mg/kg	NS	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA	0.003 U	0.0019 U	0.0024 U	NA	NA	**0.0039**	0.0030 U	NA	NA	0.0034 U	0.0030 U	NA	NA	0.0027 U	0.0039 U
	2,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA	0.00038 U	0.00024 U	0.00030 U	NA	NA	0.00049 U	0.00037 U	NA	NA	0.00042 U	0.00038 U	NA	NA	0.00034 U	0.00049 U
	Bromobenzene	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	n-Butylbenzene	mg/kg	100	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	sec-Butylbenzene	mg/kg	100	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	p-Chlorotoluene	mg/kg	100	NS	NS	NA	0.0015 U	0.00095 U	0.0012 U	NA	NA	0.0020 U	0.0015 U	NA	NA	0.0017 U	0.0015 U	NA	NA	0.0014 U	0.0020 U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA	0.0023 U	0.0014 U	0.0018 U	NA	NA	0.0029 U	0.0022 U	NA	NA	0.0025 U	0.0023 U	NA	NA	0.0020 U	0.0029 U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA	0.003 U	0.0019 U	0.0024 U	NA	NA	0.0039 U	0.0030 U	NA	NA	0.0034 U	0.0030 U	NA	NA	0.0027 U	0.0039 U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA	0.00076 U	0.00048 U	0.00061 U	NA	NA	0.00098 U	0.00074 U	NA	NA	0.00084 U	0.00076 U	NA	NA	0.00068 U	0.00098 U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-610								GLX-TPW-610A		GLX-TPW-611								GLX-TPW-611A		GLX-TPW-612								GLX-TPW-612A		GLX-TPW-613					
		Sample Depth^:				0-8 ft		0-2/1 ft		2-5/3 ft		5-8/7 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft			
		Sample Date:				11/02/2019		11/02/2019		11/02/2019		11/02/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019			
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																				
	Naphthalene	mg/kg	4	NS	NS	NA		0.003	U	0.0019	U	0.0024	U	NA		NA		0.0039	U	0.0030	U	NA		NA		0.0034	U	0.0030	U	NA		NA		0.0027	U	0.0039	U		
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U		
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	Ethyl ether	mg/kg	100	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	Isopropyl Ether	mg/kg	100	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U		
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.061	U	0.038	U	0.049	U	NA		NA		0.078	U	0.06	U	NA		NA		0.067	U	0.06	U	NA		NA		0.054	U	0.078	U		
	Total VOCs	mg/kg	N/A	4	10	*NA*		***0.198***		***0.018***		***0.035***		*NA*		*NA*		***0.095***		***0.028***		*NA*		*NA*		***0.080***		***0.059***		*NA*		*NA*		***0.028***		***0.032***			
SVOCs																																									
	Acenaphthene	mg/kg	4	NS	NS	NA		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA			
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Azobenzene	mg/kg	NS	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Fluoranthene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		**0.14**		NA		NA		NA		0.11	U	NA		NA		NA			
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	NA		NA		NA		NA		0.19	U	NA		NA		NA		0.19	U	NA		NA		NA		0.19	U	NA		NA		NA			
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Hexachloroethane	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	Isophorone	mg/kg	100	NS	NS	NA		NA		NA		NA		0.16	U	NA		NA		NA		0.16	U	NA		NA		NA		0.16	U	NA		NA		NA			
	Naphthalene	mg/kg	4	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Nitrobenzene	mg/kg	500	NS	NS	NA		NA		NA		NA		0.16	U	NA		NA		NA		0.16	U	NA		NA		NA		0.16	U	NA		NA		NA			
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Butyl benzyl phthalate	mg/kg	100	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Di-n-butylphthalate	mg/kg	50	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Diethyl phthalate	mg/kg	10	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Dimethyl phthalate	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	Benzo(a)anthracene	mg/kg	7	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.11	U	NA		NA		NA		0.11	U	NA		NA		NA			
	Benzo(a)pyrene	mg/kg	2	NS	NS	NA		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA			
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.11	U	NA		NA		NA		0.11	U	NA		NA		NA			
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.11	U	NA		NA		NA		0.11	U	NA		NA		NA			
	Chrysene	mg/kg	70	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.11	U	NA		NA		NA		0.11	U	NA		NA		NA			
	Acenaphthylene	mg/kg	1	NS	NS	NA		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA			
	Anthracene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.11	U	NA		NA		NA		0.11	U	NA		NA		NA			
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA			
	Fluorene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Phenanthrene	mg/kg	10	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.11	U	NA		NA		NA		0.11	U	NA		NA		NA			
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	NA		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA			
	Pyrene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		**0.11**		NA		NA		NA		0.11	U	NA		NA		NA			
	Aniline	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.21	U	NA		NA		NA		0.21	U	NA		NA		NA		0.21	U	NA		NA		NA			
	4-Chloroaniline	mg/kg	1	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	Dibenzofuran	mg/kg	100	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	Acetophenone	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA			
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	2-Chlorophenol	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA			
	2-Nitrophenol	mg/kg	100	NS	NS	NA		NA		NA		NA		0.38	U	NA		NA		NA		0.38	U	NA		NA		NA		0.38	U	NA		NA		NA			
	4-Nitrophenol	mg/kg	100	NS	NS	NA		NA		NA		NA		0.24	U	NA		NA		NA		0.25	U	NA		NA		NA		0.25	U	NA		NA		NA			

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-610				GLX-TPW-610A		GLX-TPW-611				GLX-TPW-611A		GLX-TPW-612				GLX-TPW-612A		GLX-TPW-613			
		Sample Depth^:				0-8 ft	0-2/1 ft	2-5/3 ft	5-8/7 ft	0-5 ft		0-5 ft	0-2/1.5 ft	2-5/4 ft		0-5 ft		0-5 ft	0-2/1.5 ft	2-5/4 ft		0-5 ft		0-5 ft	0-2/1.5 ft	2-5/4 ft	
		Sample Date:				11/02/2019	11/02/2019	11/02/2019	11/02/2019	02/08/2020		10/20/2019	10/20/2019	10/20/2019		02/08/2020		10/20/2019	10/20/2019	10/20/2019		02/08/2020		10/20/2019	10/20/2019	10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																						
	2,4-Dinitrophenol	mg/kg	3	NS	NS	NA	NA	NA	NA	0.84	U	NA	NA	NA		0.85	U	NA	NA	NA		0.85	U	NA	NA	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	NA	NA	NA	NA	0.35	U	NA	NA	NA		0.35	U	NA	NA	NA		0.36	U	NA	NA	NA	
	Phenol	mg/kg	1	NS	NS	NA	NA	NA	NA	0.17	U	NA	NA	NA		0.18	U	NA	NA	NA		0.18	U	NA	NA	NA	
	2-Methylphenol	mg/kg	500	NS	NS	NA	NA	NA	NA	0.17	U	NA	NA	NA		0.18	U	NA	NA	NA		0.18	U	NA	NA	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	NA	NA	NA	NA	0.25	U	NA	NA	NA		0.26	U	NA	NA	NA		0.26	U	NA	NA	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	NA	NA	NA	NA	0.17	U	NA	NA	NA		0.18	U	NA	NA	NA		0.18	U	NA	NA	NA	
	Pyridine	mg/kg	500	NS	NS	NA	NA	NA	NA	0.19	U	NA	NA	NA		0.19	U	NA	NA	NA		0.19	U	NA	NA	NA	
	Total SVOCs	mg/kg	N/A	100	100	*NA*	*NA*	*NA*	*NA*	*ND*		*NA*	*NA*	*NA*		***0.250***		*NA*	*NA*	*NA*		*ND*		*NA*	*NA*	*NA*	
Pesticides																											
	Delta-BHC	mg/kg	10	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Lindane	mg/kg	0.003	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Alpha-BHC	mg/kg	50	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Beta-BHC	mg/kg	10	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Heptachlor	mg/kg	0.3	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Aldrin	mg/kg	0.08	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Endrin	mg/kg	10	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Endrin ketone	mg/kg	10	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Dieldrin	mg/kg	0.08	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	4,4'-DDE	mg/kg	6	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	4,4'-DDD	mg/kg	8	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	4,4'-DDT	mg/kg	6	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Methoxychlor	mg/kg	200	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Chlordane	mg/kg	0.7	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
Herbicides																											
	MCPP	mg/kg	NS	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	MCPA	mg/kg	100	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Dalapon	mg/kg	1,000	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Dicamba	mg/kg	500	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	Dichloroprop	mg/kg	NS	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	2,4-D	mg/kg	100	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	2,4-DB	mg/kg	100	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	2,4,5-T	mg/kg	100	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA	NA	NA	NA	NA		NA	NA	NA		NA		NA	NA	NA		NA		NA	NA	NA	
PCB Aroclors																											
	Aroclor-1016	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1221	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1232	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1242	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1248	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1254	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1260	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1262	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	Aroclor-1268	mg/kg	1	NS	NS	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.0350	U	NA	NA	NA		NA	0.036	U	NA	NA		0.035	U	NA	NA	NA		0.037	U	NA	
TPH																											
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	NA		NA	NA	NA		34.1	U	NA	NA			35.1	U	NA		NA	NA		35.3	U	NA	NA		NA	
Metals, total																											
	Antimony	mg/kg	20	NS	NS	2.12	U	NA	NA	NA		NA	2.17	U	NA	NA		2.07	U	NA	NA	NA		2.15	U	NA	
	Arsenic	mg/kg	20	40	40	**3.85**		NA	NA	NA		NA	**3.56**		NA	NA		**2.90**		NA	NA	NA		**2.18**		NA	
	Barium	mg/kg	1,000	NS	NS	**20.4**		NA	NA	NA		NA	**29.6**		NA	NA		**14.8**		NA	NA	NA		**25.6**		NA	
	Beryllium	mg/kg	90	NS	NS	0.212	U	NA	NA	NA		NA	0.217	U	NA	NA		0.207	U	NA	NA	NA		0.215	U	NA	
	Cadmium	mg/kg	70	30	80	0.425	U	NA	NA	NA		NA	0.433	U	NA	NA		0.414	U	NA	NA	NA		0.431	U	NA	
	Chromium	mg/kg	100	1,000	1,000	**12.7**		NA	NA	NA		NA	**11.3**		NA	NA		**16.6**		NA	NA	NA		**13.8**		NA	
	Lead	mg/kg	200	1,000	2,000	**17.9**		NA	NA	NA		NA	**58.6**		NA	NA		**8.80**		NA	NA	NA		**9.52**		NA	
	Mercury	mg/kg	20	10	10	NA		NA	NA	NA		0.078	U	NA	NA			0.078	U	NA		NA	NA		0.079	U	NA	NA		NA	
	Nickel	mg/kg	600	NS	NS	**7.43**		NA	NA	NA		NA	**9.82**		NA	NA		**9.84**		NA	NA	NA		**10.0**		NA	
	Selenium	mg/kg	400	NS	NS	2.12	U	NA	NA	NA		NA	2.17	U	NA	NA		2.07	U	NA	NA	NA		2.15	U	NA	
	Silver	mg/kg	100	NS	NS	0.425	U	NA	NA	NA		NA	0.433	U	NA	NA		0.414	U	NA	NA	NA		0.431	U	NA	
	Thallium	mg/kg	8	NS	NS	2.12	U	NA	NA	NA		NA	2.17	U	NA	NA		2.07	U	NA	NA	NA		2.15	U	NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-610				GLX-TPW-610A	GLX-TPW-611			GLX-TPW-611A	GLX-TPW-612			GLX-TPW-612A	GLX-TPW-613		
						Sample Depth^:	0-8 ft	0-2/1 ft	2-5/3 ft	5-8/7 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft
						Sample Date:	11/02/2019	11/02/2019	11/02/2019	11/02/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																	
	Vanadium	mg/kg	400	NS	NS		**20.5**	NA	NA	NA	NA	NA	**23.6**	NA	NA	**21.1**	NA	NA	NA	NA	**20.5**	NA
	Zinc	mg/kg	1,000	NS	NS		**35.6**	NA	NA	NA	NA	NA	**51.7**	NA	NA	**36.1**	NA	NA	NA	NA	**45.8**	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:		GLX-TPW-610				GLX-TPW-610A		GLX-TPW-611				GLX-TPW-611A		GLX-TPW-612				GLX-TPW-612A		GLX-TPW-613			
		Sample Depth^:		0-8 ft	0-2/1 ft	2-5/3 ft	5-8/7 ft	0-5 ft		0-5 ft	0-2/1.5 ft	2-5/4 ft		0-5 ft		0-5 ft	0-2/1.5 ft	2-5/4 ft		0-5 ft		0-5 ft	0-2/1.5 ft	2-5/4 ft	
		Sample Date:		11/02/2019	11/02/2019	11/02/2019	11/02/2019	02/08/2020		10/20/2019	10/20/2019	10/20/2019		02/08/2020		10/20/2019	10/20/2019	10/20/2019		02/08/2020		10/20/2019	10/20/2019	10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																				
Metals, TCLP																									
	Lead	mg/L	5*	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry																									
	Ignitability	none	NS	NS	NS	NA	NA	NA	NA	NI		NA	NA	NA	NI	NA	NA	NA	NA	NI		NA	NA	NA	NA
	Specific conductance	umhos/cm	NS	4,000	8,000	NA	NA	NA	NA	10	U	NA	NA	NA	10	U	NA	NA	NA	NA	10	U	NA	NA	NA	NA
	pH	su	NS	>2 <12.5	>2 <12.5	NA	**7.2**	**7.5**	**6.3**	**7.3**		NA	**7.0**	**6.5**	**6.5**		NA	**4.0**	**6.6**	**7.3**		NA	**7.1**	**6.1**	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	NA	NA	NA	NA	10	U	NA	NA	NA	10	U	NA	NA	NA	NA	10	U	NA	NA	NA	NA
	Reactive Sulfide	mg/kg	NS	< 500	< 500	NA	NA	NA	NA	10	U	NA	NA	NA	10	U	NA	NA	NA	NA	10	U	NA	NA	NA	NA

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-613A	GLX-TPW-614				GLX-TPW-614A	GLX-TPW-615						WASH-C15DS		WASH-NABUTDS	
		Sample Depth^:				0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	4 ft	0-5 ft	0-15 ft	1 ft	2-5/4 ft	5-8/7 ft	8-12/10 ft	12-15/13 ft	N/A	5 ft	N/A	3 ft
		Sample Date:				02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	03/19/2020	03/19/2020	03/20/2020	03/20/2020
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**					Field Dup											
VOCs																					
	Methylene chloride	mg/kg	0.1	NS	NS	NA	NA	0.0043 U	0.0035 U	0.0039 U	NA	NA	0.0041 U	0.0033 U	0.0036 U	0.0037 U	0.0034 U	NA	0.0038 U	NA	0.0041 U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Chloroform	mg/kg	0.2	NS	NS	NA	NA	0.0013 U	0.0010 U	0.0012 U	NA	NA	0.0012 U	0.00099 U	0.0011 U	0.0011 U	0.0010 U	NA	0.0012 U	NA	0.0012 U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Tetrachloroethene	mg/kg	1	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	**0.0033**	NA	**0.0062**
	Chlorobenzene	mg/kg	1	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0034 U	0.0028 U	0.0031 U	NA	NA	0.0033 U	0.0026 U	0.0028 U	0.0030 U	0.0027 U	NA	0.0031 U	NA	0.0033 U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	Bromoform	mg/kg	0.1	NS	NS	NA	NA	0.0034 U	0.0028 U	0.0031 U	NA	NA	0.0033 U	0.0026 U	0.0028 U	0.0030 U	0.0027 U	NA	0.0031 U	NA	0.0033 U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	Benzene	mg/kg	2	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	Toluene	mg/kg	30	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Ethylbenzene	mg/kg	40	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Chloromethane	mg/kg	100	NS	NS	NA	NA	0.0034 U	0.0028 U	0.0031 U	NA	NA	0.0033 U	0.0026 U	0.0028 U	0.0030 U	0.0027 U	NA	0.0031 U	NA	0.0033 U
	Bromomethane	mg/kg	0.5	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Chloroethane	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA	NA	0.0013 U	0.0010 U	0.0012 U	NA	NA	0.0012 U	0.00099 U	0.0011 U	0.0011 U	0.0010 U	NA	0.0012 U	NA	0.0012 U
	Trichloroethene	mg/kg	0.3	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	p/m-Xylene	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	o-Xylene	mg/kg	100	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Xylenes (Total)	mg/kg	100	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Dibromomethane	mg/kg	500	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	Styrene	mg/kg	3	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0085 U	0.0070 U	0.0078 U	NA	NA	0.0082 U	0.0066 U	0.0071 U	0.0075 U	0.0067 U	NA	0.0077 U	NA	0.0082 U
	Acetone	mg/kg	6	NS	NS	NA	NA	**0.066**	0.017 U	**0.052**	NA	NA	0.02 U	0.016 U	**0.036**	**0.062**	**0.021**	NA	**0.13**	NA	**0.021**
	Carbon disulfide	mg/kg	100	NS	NS	NA	NA	0.0085 U	0.0070 U	0.0078 U	NA	NA	0.0082 U	0.0066 U	0.0071 U	0.0075 U	0.0067 U	NA	0.0077 U	NA	0.0082 U
	2-Butanone	mg/kg	4	NS	NS	NA	NA	0.0085 U	0.0070 U	0.0078 U	NA	NA	0.0082 U	0.0066 U	0.0071 U	0.0075 U	0.0067 U	NA	0.0077 U	NA	0.0082 U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	NA	NA	0.0085 U	0.0070 U	0.0078 U	NA	NA	0.0082 U	0.0066 U	0.0071 U	0.0075 U	0.0067 U	NA	0.0077 U	NA	0.0082 U
	2-Hexanone	mg/kg	100	NS	NS	NA	NA	0.0085 U	0.0070 U	0.0078 U	NA	NA	0.0082 U	0.0066 U	0.0071 U	0.0075 U	0.0067 U	NA	0.0077 U	NA	0.0082 U
	Bromochloromethane	mg/kg	NS	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA	NA	0.0034 U	0.0028 U	0.0031 U	NA	NA	0.0033 U	0.0026 U	0.0028 U	0.0030 U	0.0027 U	NA	0.0031 U	NA	0.0033 U
	2,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00043 U	0.00035 U	0.00039 U	NA	NA	0.00041 U	0.00033 U	0.00036 U	0.00037 U	0.00034 U	NA	0.00038 U	NA	0.00041 U
	Bromobenzene	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	n-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	sec-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	p-Chlorotoluene	mg/kg	100	NS	NS	NA	NA	0.0017 U	0.0014 U	0.0016 U	NA	NA	0.0016 U	0.0013 U	0.0014 U	0.0015 U	0.0013 U	NA	0.0015 U	NA	0.0016 U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA	NA	0.0026 U	0.0021 U	0.0023 U	NA	NA	0.0024 U	0.0020 U	0.0021 U	0.0022 U	0.0020 U	NA	0.0023 U	NA	0.0024 U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA	NA	0.0034 U	0.0028 U	0.0031 U	NA	NA	0.0033 U	0.0026 U	0.0028 U	0.0030 U	0.0027 U	NA	0.0031 U	NA	0.0033 U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA	NA	0.00085 U	0.00070 U	0.00078 U	NA	NA	0.00082 U	0.00066 U	0.00071 U	0.00075 U	0.00067 U	NA	0.00077 U	NA	0.00082 U

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-613A		GLX-TPW-614						GLX-TPW-614A		GLX-TPW-615								WASH-C15DS				WASH-NABUTDS			
		Sample Depth^:				0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		4 ft		0-5 ft		0-15 ft		1 ft		2-5/4 ft		5-8/7 ft		8-12/10 ft		12-15/13 ft		N/A		5 ft		N/A		3 ft	
		Sample Date:				02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		03/19/2020		03/19/2020		03/20/2020		03/20/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**									Field Dup																			
	Naphthalene	mg/kg	4	NS	NS	NA		NA		0.0034	U	0.0028	U	0.0031	U	NA		NA		0.0033	U	0.0026	U	0.0028	U	0.0030	U	0.0027	U	NA		0.0031	U	NA		0.0033	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		NA		0.00085	U	0.00070	U	0.00078	U	NA		NA		0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA		0.00077	U	NA		0.00082	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Ethyl ether	mg/kg	100	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Isopropyl Ether	mg/kg	100	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		NA		0.068	U	0.056	U	0.062	U	NA		NA		0.065	U	0.053	U	0.057	U	0.06	U	0.054	U	NA		0.062	U	NA		0.065	U
	Total VOCs	mg/kg	N/A	4	10	*NA*		*NA*		***0.066***		*ND*		***0.052***		*NA*		*NA*		*ND*		*ND*		***0.036***		***0.062***		***0.021***		*NA*		***0.133***		*NA*		***0.0272***	
SVOCs																																					
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		NA		0.15	U	NA		0.15	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Azobenzene	mg/kg	NS	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	**0.14**		NA		NA		NA		NA		**0.12**		NA		NA		NA		NA		NA		NA		**0.53**		NA		**0.7**		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.19	U	NA		NA		NA		NA		0.19	U	NA		NA		NA		NA		NA		NA		0.2	U	NA		0.21	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		NA		0.16	U	NA		0.17	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		NA		0.16	U	NA		0.17	U	NA	
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.1	U	NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		**0.31**		NA		**0.42**		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.14	U	NA		NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		NA		**0.27**		NA		**0.45**		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	**0.11**		NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		**0.41**		NA		**0.71**		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.1	U	NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		**0.13**		NA		**0.19**		NA	
	Chrysene	mg/kg	70	NS	NS	0.1	U	NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		**0.36**		NA		**0.46**		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.14	U	NA		NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		NA		0.15	U	NA		0.15	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.1	U	NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		0.11	U	NA		**0.12**		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.14	U	NA		NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		NA		**0.15**		NA		**0.24**		NA	
	Fluorene	mg/kg	1,000	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.1	U	NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		**0.3**		NA		**0.31**		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	0.14	U	NA		NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		NA		**0.17**		NA		**0.26**		NA	
	Pyrene	mg/kg	1,000	NS	NS	**0.12**		NA		NA		NA		NA		0.11	U	NA		NA		NA		NA		NA		NA		**0.49**		NA		**0.74**		NA	
	Aniline	mg/kg	1,000	NS	NS	0.21	U	NA		NA		NA		NA		0.21	U	NA		NA		NA		NA		NA		NA		0.22	U	NA		0.23	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Acetophenone	mg/kg	1,000	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.38	U	NA		NA		NA		NA		0.38	U	NA		NA		NA		NA		NA		NA		0.4	U	NA		0.41	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.24	U	NA		NA		NA		NA		0.25	U	NA		NA		NA		NA		NA		NA		0.26	U	NA		0.27	U	NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				**GLX-TPW-613A**		**GLX-TPW-614**								**GLX-TPW-614A**		**GLX-TPW-615**										**WASH-C15DS**				**WASH-NABUTDS**			
		Sample Depth^:				0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		4 ft		0-5 ft		0-15 ft		1 ft		2-5/4 ft		5-8/7 ft		8-12/10 ft		12-15/13 ft		N/A		5 ft		N/A		3 ft	
		Sample Date:				02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		03/19/2020		03/19/2020		03/20/2020		03/20/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**									Field Dup																					
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.84	U	NA		NA		NA		NA		0.86	U	NA		NA		NA		NA		NA		0.88	U	NA		0.92	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.35	U	NA		NA		NA		NA		0.36	U	NA		NA		NA		NA		NA		0.37	U	NA		0.38	U	NA	
	Phenol	mg/kg	1	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	0.25	U	NA		NA		NA		NA		0.26	U	NA		NA		NA		NA		NA		0.26	U	NA		0.28	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.19	U	NA		NA		NA		NA		0.19	U	NA		NA		NA		NA		NA		0.2	U	NA		0.21	U	NA	
	Total SVOCs	mg/kg	N/A	100	100	***0.370***		*NA*		*NA*		*NA*		*NA*		***0.120***		*NA*		*NA*		*NA*		*NA*		*NA*		***3.12***		*NA*		***4.6***		*NA*	
Pesticides																																			
	Delta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	Lindane	mg/kg	0.003	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.000584	U	NA		0.000617	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.000730	U	NA		0.000771	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.000876	U	NA		0.000925	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00328	U	NA		0.00347	U	NA	
	Endrin	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.000730	U	NA		0.000771	U	NA	
	Endrin ketone	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00109	U	NA		0.00116	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	4,4'-DDT	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		**0.00475**		NA		0.00347	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.000730	U	NA		0.000771	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00328	U	NA		0.00347	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.0146	U	NA		0.0154	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.00175	U	NA		0.00185	U	NA	
Herbicides																																			
	MCPP	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		3.7	U	NA		3.8	U	NA	
	MCPA	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		3.7	U	NA		3.8	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
	Dicamba	mg/kg	500	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
	2,4-D	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
	2,4-DB	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.037	U	NA		0.038	U	NA	
PCB Aroclors																																			
	Aroclor-1016	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1221	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1232	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1242	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1248	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1254	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1260	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1262	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	Aroclor-1268	mg/kg	1	NS	NS	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
	PCBs, Total	mg/kg	1	2	2	NA		0.034	U	NA		NA		NA		NA		0.035	U	NA		NA		NA		NA		0.0354	U	NA		0.0378	U	NA	
TPH																																			
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	35.2	U	NA		NA		NA		NA		36	U	NA		NA		NA		NA		NA		**65.9**		NA		**61.3**		NA	
Metals, total																																			
	Antimony	mg/kg	20	NS	NS	NA		2.03	U	NA		NA		NA		NA		2.01	U	NA		NA		NA		NA		NA		NA		2.18	U	NA	
	Arsenic	mg/kg	20	40	40	NA		**2.55**		NA		NA		NA		NA		**4.11**		NA		NA		NA		NA		**9.84**		NA		**6.61**		NA	
	Barium	mg/kg	1,000	NS	NS	NA		**23.4**		NA		NA		NA		NA		**16.7**		NA		NA		NA		NA		**35.2**		NA		**36.8**		NA	
	Beryllium	mg/kg	90	NS	NS	NA		0.203	U	NA		NA		NA		NA		0.201	U	NA		NA		NA		NA		NA		NA		**0.419**		NA	
	Cadmium	mg/kg	70	30	80	NA		0.406	U	NA		NA		NA		NA		0.403	U	NA		NA		NA		NA		0.436	U	NA		**0.493**		NA	
	Chromium	mg/kg	100	1,000	1,000	NA		**11.3**		NA		NA		NA		NA		**9.49**		NA		NA		NA		NA		**17.0**		NA		**15.5**		NA	
	Lead	mg/kg	200	1,000	2,000	NA		**8.80**		NA		NA		NA		NA		**63.3**		NA		NA		NA		NA		**37.3**		NA		**22.9**		NA	
	Mercury	mg/kg	20	10	10	0.077	U	NA		NA		NA		NA		0.079	U	NA		NA		NA		NA		NA		**0.191**		NA		0.086	U	NA	
	Nickel	mg/kg	600	NS	NS	NA		**9.11**		NA		NA		NA		NA		**6.44**		NA		NA		NA		NA		NA		NA		**15.1**		NA	
	Selenium	mg/kg	400	NS	NS	NA		2.03	U	NA		NA		NA		NA		2.01	U	NA		NA		NA		NA		2.18	U	NA		2.18	U	NA	
	Silver	mg/kg	100	NS	NS	NA		0.406	U	NA		NA		NA		NA		0.403	U	NA		NA		NA		NA		0.436	U	NA		0.436	U	NA	
	Thallium	mg/kg	8	NS	NS	NA		2.03	U	NA		NA		NA		NA		2.01	U	NA		NA		NA		NA		NA		NA		2.18	U	NA	

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

						Sample Location:	GLX-TPW-613A	GLX-TPW-614				GLX-TPW-614A	GLX-TPW-615						WASH-C15DS		WASH-NABUTDS	
						Sample Depth^:	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	4 ft	0-5 ft	0-15 ft	1 ft	2-5/4 ft	5-8/7 ft	8-12/10 ft	12-15/13 ft	N/A	5 ft	N/A	3 ft
						Sample Date:	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	03/19/2020	03/19/2020	03/20/2020	03/20/2020
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**						Field Dup											
	Vanadium	mg/kg	400	NS	NS		NA	**19.3**	NA	NA	NA	NA	**10.9**	NA	NA	NA	NA	NA	NA	NA	**25.0**	NA
	Zinc	mg/kg	1,000	NS	NS		NA	**47.3**	NA	NA	NA	NA	**18.6**	NA	NA	NA	NA	NA	NA	NA	**55.4**	NA

TABLE 2
Additional Characterization Soil Ananlytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

		Sample Location:				GLX-TPW-613A		GLX-TPW-614						GLX-TPW-614A		GLX-TPW-615								WASH-C15DS				WASH-NABUTDS			
		Sample Depth^:				0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		4 ft		0-5 ft		0-15 ft		1 ft		2-5/4 ft		5-8/7 ft		8-12/10 ft		12-15/13 ft		N/A		5 ft		N/A		3 ft	
		Sample Date:				02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		03/19/2020		03/19/2020		03/20/2020		03/20/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**									Field Dup																					
Metals, TCLP																																			
	Lead	mg/L	5*	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
General Chemistry																																			
	Ignitability	none	NS	NS	NS	NI		NA		NA		NA		NA		NI		NA		NA		NA		NA		NA		NA		NI		NA		NI		NA	
	Specific conductance	umhos/cm	NS	4,000	8,000	**11**		NA		NA		NA		NA		**25**		NA		NA		NA		NA		NA		NA		**110**		NA		**180**		NA	
	pH	su	NS	>2 <12.5	>2 <12.5	**7.4**		NA		**7.5**		**6.3**		NA		**8.2**		NA		NA		**6.6**		**6.6**		**6.2**		**6.2**		**10.2**		NA		**10.9**		NA	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	NA		NA		NA		NA		10	U	NA		NA		NA		NA		NA		NA		10	U	NA		10	U	NA	
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	NA		NA		NA		NA		10	U	NA		NA		NA		NA		NA		NA		10	U	NA		10	U	NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

						Sample Location:	GLC-VMF(48)-RCS-2-FILL(48)		GLC-WASHPS		GLC-WASHPS		GLC-OSCDRILLSPOILS		GLC-VMF(20)-RCS-1-FILL(16)		GLC-100IB-(0-3)		GLC-NP-314-15	
						Sample Name^:	GLC-VMF(48)-RCS-2-FILL(48)-DC-COMP/GLC-VMF(48)-RCS-2-FILL(48)-DC-VOC-7		GLC-WASHPS-40821-DC-COMP (0-2)/GLC-WASHPS-40821-DC-VOC (1-2)		GLC-WASHPS-041221-DC-COMP/GLC-WASHPS-041221-DC-VOC-6		OSCDRILLSPOILS-210329-DC-COMP/GLC-OSCDRILLSPOILS-210329-DC-VOC-8		GLC-VMF(20)-RCS-1-FILL(16)-DC-COMP/GLC-VMF(20)-RCS-1-FILL(16)-DC-VOC-2		GLC-100IB-(0-3)-041521-DC-COMP/GLC-100IB-(0-3)-041521-DC-VOC-3		GLC-NP-314-15-DC-COMP/GLC-NP-314-15-DC-VOC(4)	
						Sample Depth^:	N/A/7 ft		0-2/1-2 ft		N/A/6 ft		N/A/8 ft		N/A/2 ft		N/A/3 ft		N/A/4 ft	
						Sample Date:	4/6/2021		4/8/2021		4/23/2021		4/23/2021		4/28/2021		4/28/2021		6/10/2021	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*															
VOCs																				
	Methylene chloride	mg/kg	0.1	NS	NS		0.0026	U	0.0038	U	0.0042	U	0.0038	U	0.0028	U	0.0036	U	0.0026	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Chloroform	mg/kg	0.2	NS	NS		0.00077	U	0.0012	U	0.0012	U	0.0011	U	0.00085	U	0.0011	U	0.00078	U
	Carbon tetrachloride	mg/kg	5	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Dibromochloromethane	mg/kg	0.005	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Tetrachloroethene	mg/kg	1	NS	NS		**0.00034**		**0.0024**		**0.0010**		**0.00056**		**0.00040**		0.00036	U	**0.00041**	
	Chlorobenzene	mg/kg	1	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS		0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	Bromodichloromethane	mg/kg	0.1	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	Bromoform	mg/kg	0.1	NS	NS		0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	Benzene	mg/kg	2	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	**0.0035**		0.00026	U
	Toluene	mg/kg	30	NS	NS		0.00051	U	**0.00079**		0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Ethylbenzene	mg/kg	40	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Chloromethane	mg/kg	100	NS	NS		0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U
	Bromomethane	mg/kg	0.5	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Vinyl chloride	mg/kg	0.7	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Chloroethane	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,1-Dichloroethene	mg/kg	3	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS		0.00077	U	0.0012	U	0.0012	U	0.0011	U	0.00085	U	0.0011	U	0.00078	U
	Trichloroethene	mg/kg	0.3	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	p/m-Xylene	mg/kg	100(2)	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	o-Xylene	mg/kg	100(2)	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Xylenes (Total)	mg/kg	100	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	1,2-Dichloroethene (total)	mg/kg	0.3	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Dibromomethane	mg/kg	500	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Styrene	mg/kg	3	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS		0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U
	Acetone	mg/kg	6	NS	NS		0.013	U	0.019	U	**0.036**		**0.02**		0.014	U	0.018	U	**0.015**	
	Carbon disulfide	mg/kg	100	NS	NS		0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U
	2-Butanone	mg/kg	4	NS	NS		0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS		0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U
	2-Hexanone	mg/kg	100	NS	NS		0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U
	Bromochloromethane	mg/kg	NS	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Tetrahydrofuran	mg/kg	500	NS	NS		0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	1,3-Dichloropropane	mg/kg	500	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS		0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U
	Bromobenzene	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	tert-Butylbenzene	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	o-Chlorotoluene	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS		0.0015	U	0.0023	U	0.0025	U	0.0023	U	0.0017	U	0.0022	U	0.0016	U
	Hexachlorobutadiene	mg/kg	30	NS	NS		0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U
	Isopropylbenzene	mg/kg	1,000	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	p-Isopropyltoluene	mg/kg	100	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	Naphthalene	mg/kg	4	NS	NS		0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U
	n-Propylbenzene	mg/kg	100	NS	NS		0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Ethyl ether	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Isopropyl Ether	mg/kg	100	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS		0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U
	1,4-Dioxane	mg/kg	0.2	NS	NS		0.041	U	0.062	U	0.066	U	0.061	U	0.045	U	0.058	U	0.042	U
	Total VOCs	mg/kg	NS	4	10		***0.0003***		***0.003***		***0.037***		***0.021***		***0.0004***		***0.004***		***0.015***	
SVOCs																				
	Acenaphthene	mg/kg	4	NS	NS		0.15	U	0.15	U	0.16	U	0.14	U	0.14	U	0.14	U	0.14	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Azobenzene	mg/kg	NS	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Fluoranthene	mg/kg	1,000	NS	NS		**0.35**		**0.67**		**0.45**		**1.3**		**0.5**		**0.62**		**2.7**	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS		0.21	U	0.21	U	0.21	U	0.19	U	0.19	U	0.19	U	0.19	U
	Hexachlorobutadiene	mg/kg	30	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Hexachloroethane	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	Isophorone	mg/kg	100	NS	NS		0.17	U	0.17	U	0.18	U	0.16	U	0.16	U	0.16	U	0.16	U
	Naphthalene	mg/kg	4	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	**0.3**	
	Nitrobenzene	mg/kg	500	NS	NS		0.17	U	0.17	U	0.18	U	0.16	U	0.16	U	0.16	U	0.16	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	**0.32**		0.18	U
	Butyl benzyl phthalate	mg/kg	100	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Di-n-butylphthalate	mg/kg	50	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Diethyl phthalate	mg/kg	10	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Dimethyl phthalate	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	Benzo(a)anthracene	mg/kg	7	NS	NS		**0.2**		**0.42**		**0.28**		**0.79**		**0.28**		**0.39**		**2**	
	Benzo(a)pyrene	mg/kg	2	NS	NS		**0.18**		**0.41**		**0.27**		**0.64**		**0.24**		**0.36**		**1.9**	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS		**0.23**		**0.51**		**0.34**		**1**		**0.34**		**0.47**		**2.3**	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS		0.12	U	**0.22**		**0.12**		**0.38**		**0.1**		**0.14**		**0.77**	
	Chrysene	mg/kg	70	NS	NS		**0.17**		**0.42**		**0.27**		**0.89**		**0.26**		**0.36**		**1.9**	
	Acenaphthylene	mg/kg	1	NS	NS		0.15	U	0.15	U	0.16	U	0.14	U	0.14	U	0.14	U	**0.3**	
	Anthracene	mg/kg	1,000	NS	NS		0.12	U	0.11	U	0.12	U	**0.36**		0.1	U	**0.1**		**0.58**	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS		0.15	U	**0.25**		**0.17**		**0.3**		**0.14**		**0.24**		**1.3**	
	Fluorene	mg/kg	1,000	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	**0.18**	
	Phenanthrene	mg/kg	10	NS	NS		**0.14**		**0.45**		**0.21**		**0.39**		**0.27**		**0.34**		**1.5**	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	**0.094**		0.074	U	0.073	U	**0.29**	
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS		0.15	U	**0.28**		**0.18**		**0.35**		**0.15**		**0.24**		**1.4**	
	Pyrene	mg/kg	1,000	NS	NS		**0.32**		**0.6**		**0.4**		**1.1**		**0.46**		**0.61**		**2.8**	
	Aniline	mg/kg	1,000	NS	NS		0.23	U	0.23	U	0.24	U	0.22	U	0.21	U	0.21	U	0.22	U
	4-Chloroaniline	mg/kg	1	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Dibenzofuran	mg/kg	100	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	2-Methylnaphthalene	mg/kg	0.7	NS	NS		0.081	U	**0.1**		0.082	U	0.076	U	0.074	U	0.073	U	**0.13**	
	Acetophenone	mg/kg	1,000	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	2-Chlorophenol	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS		0.081	U	0.08	U	0.082	U	0.076	U	0.074	U	0.073	U	0.075	U
	2-Nitrophenol	mg/kg	100	NS	NS		0.42	U	0.41	U	0.42	U	0.39	U	0.38	U	0.38	U	0.39	U
	4-Nitrophenol	mg/kg	100	NS	NS		0.27	U	0.27	U	0.27	U	0.25	U	0.25	U	0.24	U	0.25	U
	2,4-Dinitrophenol	mg/kg	3	NS	NS		0.93	U	0.92	U	0.94	U	0.86	U	0.84	U	0.84	U	0.86	U
	Pentachlorophenol	mg/kg	3	NS	NS		0.39	U	0.38	U	0.39	U	0.36	U	0.35	U	0.35	U	0.36	U
	Phenol	mg/kg	1	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	2-Methylphenol	mg/kg	500	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS		0.28	U	0.27	U	0.28	U	0.26	U	0.25	U	0.25	U	0.26	U
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS		0.19	U	0.19	U	0.2	U	0.18	U	0.18	U	0.17	U	0.18	U
	Pyridine	mg/kg	500	NS	NS		0.21	U	0.21	U	0.21	U	0.19	U	0.19	U	0.19	U	0.19	U
	Total SVOCs	mg/kg	NS	100	100		***1.59***		***4.33***		***2.69***		***7.59***		***2.74***		***4.19***		***20.4***	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

						Sample Location:	GLC-VMF(48)-RCS-2-FILL(48)		GLC-WASHPS				GLC-OSCDRILLSPOILS		GLC-VMF(20)-RCS-1-FILL(16)		GLC-100IB-(0-3)		GLC-NP-314-15	
						Sample Name^:	GLC-VMF(48)-RCS-2-FILL(48)-DC-COMP/GLC-VMF(48)-RCS-2-FILL(48)-DC-VOC-7		GLC-WASHPS-40821-DC-COMP (0-2)/GLC-WASHPS-40821-DC-VOC (1-2)		GLC-WASHPS-041221-DC-COMP/GLC-WASHPS-041221-DC-VOC-6		OSCDRILLSPOILS-210329-DC-COMP/GLC-OSCDRILLSPOILS-210329-DC-VOC-8		GLC-VMF(20)-RCS-1-FILL(16)-DC-COMP/GLC-VMF(20)-RCS-1-FILL(16)-DC-VOC-2		GLC-100IB-(0-3)-041521-DC-COMP/GLC-100IB-(0-3)-041521-DC-VOC-3		GLC-NP-314-15-DC-COMP/GLC-NP-314-15-DC-VOC(4)	
						Sample Depth^:	N/A/7 ft		0-2/1-2 ft		N/A/6 ft		N/A/8 ft		N/A/2 ft		N/A/3 ft		N/A/4 ft	
						Sample Date:	4/6/2021		4/8/2021		4/23/2021		4/23/2021		4/28/2021		4/28/2021		6/10/2021	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*															
PCBs																				
	Aroclor-1016	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1221	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1232	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1242	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1248	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1254	mg/kg	1	NS	NS		**0.0606**		0.0368	U	0.0387	U	0.0346	U	**0.0794**		**0.0451**		0.0362	U
	Aroclor-1260	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1262	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Aroclor-1268	mg/kg	1	NS	NS		0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U
	Total PCBs	mg/kg	1	2	2		**0.0606**		0.0368	U	0.0387	U	0.0346	U	**0.0794**		**0.0451**		0.0362	U
Pesticides																				
	Delta-BHC	mg/kg	10	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
	Lindane	mg/kg	0.003	NS	NS		0.000609	U	0.000614	U	0.000590	U	0.000566	U	0.000560	U	0.000564	U	0.000575	U
	Alpha-BHC	mg/kg	50	NS	NS		0.000761	U	0.000767	U	0.000738	U	0.000707	U	0.000701	U	0.000704	U	0.000719	U
	Beta-BHC	mg/kg	10	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
	Heptachlor	mg/kg	0.3	NS	NS		0.000913	U	0.000920	U	0.000886	U	0.000848	U	0.000841	U	0.000845	U	0.000862	U
	Aldrin	mg/kg	0.08	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
	Heptachlor epoxide	mg/kg	0.1	NS	NS		0.00342	U	0.00345	U	0.00332	U	0.00318	U	0.00315	U	0.00317	U	0.00323	U
	Endrin	mg/kg	10	NS	NS		0.000761	U	0.000767	U	0.000738	U	0.000707	U	0.000701	U	0.000704	U	0.000719	U
	Endrin ketone	mg/kg	NS	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
	Dieldrin	mg/kg	0.08	NS	NS		0.00114	U	0.00115	U	0.00111	U	0.00106	U	0.00105	U	0.00106	U	0.00108	U
	4,4'-DDE	mg/kg	6	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	**0.00348**		**0.00210**	**P**	0.00172	U
	4,4'-DDD	mg/kg	8	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	**0.00518**		**0.00316**		**0.00236**	
	4,4'-DDT	mg/kg	6	NS	NS		0.00342	U	0.00345	U	0.00332	U	0.00318	U	**0.0103**	**P**	0.00317	U	**0.0102**	**P**
	Endosulfan I	mg/kg	0.5	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
	Endosulfan II	mg/kg	0.5	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
	Endosulfan sulfate	mg/kg	0.5	NS	NS		0.000761	U	0.000767	U	0.000738	U	0.000707	U	0.000701	U	0.000704	U	0.000719	U
	Methoxychlor	mg/kg	200	NS	NS		0.00342	U	0.00345	U	0.00332	U	0.00318	U	0.00315	U	0.00317	U	0.00323	U
	Chlordane	mg/kg	0.7	NS	NS		0.0152	U	0.0153	U	0.0148	U	0.0141	U	0.0140	U	0.0141	U	0.0144	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U
Herbicides																				
	MCPP	mg/kg	NS	NS	NS		3.9	U	3.8	U	3.9	U	3.5	U	3.6	U	3.5	U	3.6	U
	MCPA	mg/kg	100	NS	NS		3.9	U	3.8	U	3.9	U	3.5	U	3.6	U	3.5	U	3.6	U
	Dalapon	mg/kg	1,000	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
	Dicamba	mg/kg	500	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
	Dichloroprop	mg/kg	NS	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
	2,4-D	mg/kg	100	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
	2,4-DB	mg/kg	100	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
	2,4,5-T	mg/kg	100	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS		0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U
TPH																				
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000		39.3	U	**75.4**		**65.7**		**64.1**		**48.8**		**107**		**682**	
Metals, total																				
	Antimony	mg/kg	20	NS	NS		2.33	U	2.19	U	2.26	U	2.09	U	2.10	U	2.06	U	2.13	U
	Arsenic	mg/kg	20	40	40		**5.50**		**2.58**		**7.48**		**6.68**		**2.24**		**1.64**		**7.25**	
	Barium	mg/kg	1,000	NS	NS		**51.0**		**35.8**		**41.5**		**49.5**		**35.1**		**46.4**		**51.7**	
	Beryllium	mg/kg	90	NS	NS		**0.270**		**0.373**		0.226	U	0.209	U	**0.315**		**0.362**		**0.392**	
	Cadmium	mg/kg	70	30	80		**0.536**		0.439	U	**0.488**		**0.418**		0.420	U	**0.486**		**0.537**	
	Chromium	mg/kg	100	1,000	1,000		**22.0**		**9.72**		**19.3**		**19.4**		**20.5**		**24.3**		**16.1**	
	Lead	mg/kg	200	1,000	2,000		**18.8**		**27.6**		**78.8**		**87.7**		**20.7**		**25.8**		**133**	
	Mercury	mg/kg	20	10	10		0.086	U	0.078	U	**0.252**		**0.090**		**0.134**		**0.199**		**0.242**	
	Nickel	mg/kg	600	NS	NS		**17.7**		**7.44**		**14.0**		**11.3**		**15.8**		**15.4**		**11.9**	
	Selenium	mg/kg	400	NS	NS		2.33	U	2.19	U	2.26	U	2.09	U	2.10	U	2.06	U	2.13	U
	Silver	mg/kg	100	NS	NS		0.466	U	0.439	U	0.451	U	0.418	U	0.420	U	0.412	U	0.426	U
	Thallium	mg/kg	8	NS	NS		2.33	U	2.19	U	2.26	U	2.09	U	2.10	U	2.06	U	2.13	U
	Vanadium	mg/kg	400	NS	NS		**49.2**		**12.0**		**24.8**		**25.8**		**43.9**		**45.8**		**25.0**	
	Zinc	mg/kg	1,000	NS	NS		**43.6**		**21.1**		**75.7**		**48.7**		**56.8**		**71.0**		**123**	
Metals, TCLP																				
	Lead	mg/L	5**	NS	NS		NA		NA		NA		NA		NA		NA		0.500	U
General Chemistry																				
	Ignitability		NS	NS	NS		NI		NI		NI		NI		NI		NI		NI	
	Reactive Cyanide	mg/kg	NS	< 250	< 250		10	U	10	U	10	U	10	U	10	U	10	U	10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500		10	U	10	U	10	U	10	U	10	U	10	U	10	U
	pH	su	NS	>2 <12.5	>2 <12.5		**8.5**		**8.3**		**8.6**		**8.2**		**8.1**		**8.3**		**8.4**	
	Specific conductance	umhos/cm	NS	4,000	8,000		**86**		**69**		**53**		**82**		**53**		**68**		**110**	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

ug/L - micrograms per liter.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

** - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

^ - For other/VOCs analysis; otherwise for all the analyses.

(1) - Value for C9-C10 aromatics used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - Value for Dichloropropane used.

(4) - Value for Dichloropropene used.

(5) - Value for Chlorotoluene used.

TABLE 1
SOIL SAMPLING SUMMARY

Collection Date	Collection Method	Disposal Sample ID(s)	Receiving Facility or Anticipated Receiving Facility	Disposal Package (Approval Number)
10/7/2021	Stockpile	GLC-NP-306A-18-C-DC-COMP GLC-NP-306A-18-C-DC-VOC-7	Niagara	Niagara No. 6
10/22/2021	Stockpile	GLC-WSPTOPCLEAN-DC-COMP GLC-WSPTOPCLEAN-DC-VOC-7	Lynn	Lynn No. 2 Amendment #4
11/9/2021	Stockpile	GLC-WASHPSSED102221-DC-COMP GLC-WASHPSSED102221-DC-VOC-3	Lynn	Lynn No. 2 Amendment #5
11/11/2021	Stockpile	GLC-NP-318B-02-DC-COMP GLC-NP-318B-02-DC-VOC-4	Heritage	Heritage No. 2 Amendment #4
12/20/2021	Stockpile	GLC-WASHPS20211213-DC-COMP GLC-WASHPS20211213-DC-VOC-06	Lynn	Lynn No. 2 Amendment #6
1/12/2022	Stockpile	GLC-WASHPUMP20210805RU-COMP GLC-WASHPUMP20210805RU-VOC(5)	Lynn	Lynn No. 2 Amendment #7

Receiving Facilities: Lynn Landfill Company, LLC. - Marine Boulevard to 25 Riley Way Extension, Lynn, MA 01905
Allied Niagara Falls Landfill – 5600 Niagara Fall Boulevard, Niagara Falls, NY 14304
Heritage Environmental Services – 4370 W. County Road 1275 N., Roachdale, IN 46172

Table 2 -- Soil Characterization Analytical Results -- October, November, and December 2021 and January 2022
Washington Street
MBTA Green Line Extension Project

						Sample Location:	GLC-NP-306A-18-C-DC		GLC-WASHPSSED-		GLC-WSPTOPCLEA		NP-318B-02-DC		WASHPS20211213-DC		WASHPUMP20210805RU	
						Sample Name^:	GLC-NP-306A-18-C-DC-COMP/GLC-NP-306A-18-C-DC-VOC-7		GLC-WASHPSSED10 2221-DC-COMP/GLC-WASHPSSED10 2221-DC-VOC-3		GLC-WSPTOPCLEAN-DC-COMP/GLC-WSPTOPCLEAN-DC-VOC-7		GLC-NP-318B-02-DC-COMP/GLC-NP-318B-02-DC-VOC-4		GLC-WASHPS20211213-DC-COMP/GLC-WASHPS20211213-DC-VOC-06		GLC-WASHPUMP20210805RU-COMP/GLC-WASHPUMP20210805RU-VOC (5)	
						Lab Sample ID^^:	L2154830-05/06/L2155291-02		L2161496-01/02		L2158092-01/02		L2162117-01/02		L2170050-01/02		L2201603-01/02	
						Sample Depth:	N/A/7 ft		N/A/3 ft		N/A/7 ft		N/A/4 ft		N/A/6 ft		N/A/5 ft	
						Sample Date:	10/7/2021		11/9/2021		10/22/2021		11/11/2021		12/20/2021		1/12/2022	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*													
VOCs																		
	Methylene chloride	mg/kg	0.1	NS	NS	0.27	U	0.0070	U	0.0036	U	0.24	U	0.0048	U	0.0056	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Chloroform	mg/kg	0.2	NS	NS	0.081	U	0.0021	U	0.0011	U	0.074	U	0.0014	U	0.0017	U
	Carbon tetrachloride	mg/kg	5	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Tetrachloroethene	mg/kg	1	NS	NS	**0.05**		**0.023**		**0.017**		**3.2**		**0.0089**		**0.0035**	
	Chlorobenzene	mg/kg	1	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	0.22	U	0.0056	U	0.0028	U	0.2	U	0.0038	U	0.0045	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	0.027	U	0.00070	U	**0.00041**		**0.024**		0.00048	U	0.00056	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	Bromoform	mg/kg	0.1	NS	NS	0.22	U	0.0056	U	0.0028	U	0.2	U	0.0038	U	0.0045	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	Benzene	mg/kg	2	NS	NS	**0.18**		0.00070	U	0.00036	U	0.024	U	**0.00063**		0.00056	U
	Toluene	mg/kg	30	NS	NS	**0.32**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Ethylbenzene	mg/kg	40	NS	NS	**0.41**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Chloromethane	mg/kg	100	NS	NS	0.22	U	0.0056	U	0.0028	U	0.2	U	0.0038	U	0.0045	U
	Bromomethane	mg/kg	0.5	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Vinyl chloride	mg/kg	0.7	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Chloroethane	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	0.081	U	0.0021	U	0.0011	U	0.074	U	0.0014	U	0.0017	U
	Trichloroethene	mg/kg	0.3	NS	NS	0.027	U	**0.0034**		**0.00059**		**0.29**		**0.00080**		**0.00065**	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	**0.49**		0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	o-Xylene	mg/kg	100(2)	NS	NS	**0.19**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Xylenes (Total)	mg/kg	100	NS	NS	**0.68**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	0.054	U	**0.0026**		0.00071	U	**0.079**		0.00096	U	0.0011	U
	1,2-Dichloroethene (total)	mg/kg	0.3	NS	NS	0.054	U	**0.0026**		0.00071	U	**0.079**		0.00096	U	0.0011	U
	Dibromomethane	mg/kg	500	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Styrene	mg/kg	3	NS	NS	**0.12**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	0.54	U	0.014	U	0.0071	U	0.49	U	0.0096	U	0.011	U
	Acetone	mg/kg	6	NS	NS	0.54	U	0.035	U	0.018	U	0.49	U	0.024	U	0.028	U
	Carbon disulfide	mg/kg	100	NS	NS	0.54	U	0.014	U	0.0071	U	0.49	U	0.0096	U	0.011	U
	2-Butanone	mg/kg	4	NS	NS	0.54	U	0.014	U	0.0071	U	0.49	U	0.0096	U	0.011	U
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	0.54	U	0.014	U	0.0071	U	0.49	U	0.0096	U	0.011	U
	2-Hexanone	mg/kg	100	NS	NS	0.54	U	0.014	U	0.0071	U	0.49	U	0.0096	U	0.011	U
	Bromochloromethane	mg/kg	NS	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Tetrahydrofuran	mg/kg	500	NS	NS	0.22	U	0.0056	U	0.0028	U	0.2	U	0.0038	U	0.0045	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	0.027	U	0.00070	U	0.00036	U	0.024	U	0.00048	U	0.00056	U
	Bromobenzene	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	0.054	U	0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	tert-Butylbenzene	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	o-Chlorotoluene	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	0.16	U	0.0042	U	0.0021	U	0.15	U	0.0029	U	0.0033	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.22	U	0.0056	U	0.0028	U	0.2	U	0.0038	U	0.0045	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	**0.069**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	**0.16**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	Naphthalene	mg/kg	4	NS	NS	**5.4**		**0.014**		0.0028	U	0.2	U	**0.0052**		0.0045	U
	n-Propylbenzene	mg/kg	100	NS	NS	**0.057**		0.0014	U	0.00071	U	0.049	U	0.00096	U	0.0011	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	**0.36**		0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	**0.4**		0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Ethyl ether	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Isopropyl Ether	mg/kg	100	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	0.11	U	0.0028	U	0.0014	U	0.098	U	0.0019	U	0.0022	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	4.3	U	0.11	U	0.057	U	3.9	U	0.077	U	0.089	U
	Total VOCs	mg/kg	NS	4	10	***8.21***		***0.043***		***0.018***		***3.59***		***0.016***		***0.004***	

Table 2 -- Soil Characterization Analytical Results -- October, November, and December 2021 and January 2022
Washington Street
MBTA Green Line Extension Project

						Sample Location:	GLC-NP-306A-18-C-DC		GLC-WASHPSSED-		GLC-WSPTOPCLEA		NP-318B-02-DC		WASHPS20211213-DC		WASHPUMP20210805RU	
						Sample Name^:	GLC-NP-306A-18-C-DC-COMP/GLC-NP-306A-18-C-DC-VOC-7		GLC-WASHPSSED10 2221-DC-COMP/GLC-WASHPSSED10 2221-DC-VOC-3		GLC-WSPTOPCLEAN-DC-COMP/GLC-WSPTOPCLEAN-DC-VOC-7		GLC-NP-318B-02-DC-COMP/GLC-NP-318B-02-DC-VOC-4		GLC-WASHPS20211213-DC-COMP/GLC-WASHPS20211213-DC-VOC-06		GLC-WASHPUMP20210805RU-COMP/GLC-WASHPUMP20210805RU-VOC (5)	
						Lab Sample ID^^:	L2154830-05/06/L2155291-02		L2161496-01/02		L2158092-01/02		L2162117-01/02		L2170050-01/02		L2201603-01/02	
						Sample Depth:	N/A/7 ft		N/A/3 ft		N/A/7 ft		N/A/4 ft		N/A/6 ft		N/A/5 ft	
						Sample Date:	10/7/2021		11/9/2021		10/22/2021		11/11/2021		12/20/2021		1/12/2022	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*													
SVOCs																		
	Acenaphthene	mg/kg	4	NS	NS		**6.2**		0.28	U	0.15	U	0.15	U	**0.22**		0.53	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Azobenzene	mg/kg	NS	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Fluoranthene	mg/kg	1,000	NS	NS		**19**		**1**		**1.8**		**1.1**		**3.5**		**1.1**	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS		1	U	0.38	U	0.2	U	0.2	U	0.24	U	0.72	U
	Hexachlorobutadiene	mg/kg	30	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Hexachloroethane	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	Isophorone	mg/kg	100	NS	NS		0.83	U	0.31	U	0.17	U	0.16	U	0.2	U	0.6	U
	Naphthalene	mg/kg	4	NS	NS		**11**		**0.42**		**0.34**		0.18	U	**0.51**		0.67	U
	Nitrobenzene	mg/kg	500	NS	NS		0.83	U	0.31	U	0.17	U	0.16	U	0.2	U	0.6	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Butyl benzyl phthalate	mg/kg	100	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Di-n-butylphthalate	mg/kg	50	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Diethyl phthalate	mg/kg	10	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Dimethyl phthalate	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	Benzo(a)anthracene	mg/kg	7	NS	NS		**10**		**0.45**		**1.2**		**0.68**		**1.8**		**0.62**	
	Benzo(a)pyrene	mg/kg	2	NS	NS		**10**		**0.5**		**1.3**		**0.66**		**1.8**		**0.69**	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS		**10**		**0.64**		**1.5**		**0.74**		**2.1**		**0.84**	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS		**3.9**		**0.21**		**0.56**		**0.29**		**0.67**		0.4	U
	Chrysene	mg/kg	70	NS	NS		**9.1**		**0.51**		**1.2**		**0.65**		**1.8**		**0.61**	
	Acenaphthylene	mg/kg	1	NS	NS		**4.8**		0.28	U	**0.31**		0.15	U	**0.5**		0.53	U
	Anthracene	mg/kg	1,000	NS	NS		**8.1**		0.21	U	**0.41**		**0.18**		**0.76**		0.4	U
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS		**6**		**0.32**		**0.88**		**0.46**		**1.1**		0.53	U
	Fluorene	mg/kg	1,000	NS	NS		**8.8**		0.35	U	**0.19**		0.18	U	**0.35**		0.67	U
	Phenanthrene	mg/kg	10	NS	NS		**24**		**0.82**		**0.97**		**0.54**		**1.5**		**0.62**	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS		**1**		0.15	U	**0.19**		**0.13**		**0.26**		0.28	U
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS		**6.4**		**0.34**		**0.94**		**0.54**		**1.2**		0.53	U
	Pyrene	mg/kg	1,000	NS	NS		**20**		**1**		**1.8**		**0.98**		**3.4**		**1.1**	
	Aniline	mg/kg	1,000	NS	NS		1.1	U	0.42	U	0.22	U	0.22	U	0.27	U	0.8	U
	4-Chloroaniline	mg/kg	1	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Dibenzofuran	mg/kg	100	NS	NS		**3.4**		0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	2-Methylnaphthalene	mg/kg	0.7	NS	NS		**6.6**		0.15	U	**0.18**		0.077	U	**0.28**		0.28	U
	Acetophenone	mg/kg	1,000	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	2-Chlorophenol	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS		0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U
	2-Nitrophenol	mg/kg	100	NS	NS		2	U	0.75	U	0.41	U	0.39	U	0.48	U	1.4	U
	4-Nitrophenol	mg/kg	100	NS	NS		1.3	U	0.49	U	0.26	U	0.26	U	0.31	U	0.93	U
	2,4-Dinitrophenol	mg/kg	3	NS	NS		4.4	U	1.7	U	0.9	U	0.88	U	1.1	U	3.2	U
	Pentachlorophenol	mg/kg	3	NS	NS		1.8	U	0.7	U	0.38	U	0.36	U	0.44	U	1.3	U
	Phenol	mg/kg	1	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	2-Methylphenol	mg/kg	500	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	3/4-Methylphenol	mg/kg	NS	NS	NS		1.3	U	0.5	U	0.27	U	0.26	U	0.32	U	0.96	U
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS		0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U
	Pyridine	mg/kg	500	NS	NS		1	U	0.38	U	0.2	U	0.2	U	0.24	U	0.72	U
	Biphenyl	mg/kg	0.05	NS	NS		NA		0.8	U	NA		0.42	U	**0.045**		0.13	U
	Total SVOCs	mg/kg	NS	100	100		***168***		***6.21***		***13.8***		***6.95***		***21.8***		***5.58***	
PCBs																		
	Aroclor-1016	mg/kg	1	NS	NS		0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1221	mg/kg	1	NS	NS		0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1232	mg/kg	1	NS	NS		0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1242	mg/kg	1	NS	NS		**0.236**		0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1248	mg/kg	1	NS	NS		0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1254	mg/kg	1	NS	NS		**0.0879**		0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1260	mg/kg	1	NS	NS		**0.0428**		0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1262	mg/kg	1	NS	NS		0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Aroclor-1268	mg/kg	1	NS	NS		0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U
	Total PCBs	mg/kg	1	2	2		**0.367**		0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U

Table 2 -- Soil Characterization Analytical Results -- October, November, and December 2021 and January 2022
Washington Street
MBTA Green Line Extension Project

						Sample Location:	GLC-NP-306A-18-C-DC		GLC-WASHPSSED-		GLC-WSPTOPCLEA		NP-318B-02-DC		WASHPS20211213-DC		WASHPUMP20210805RU	
						Sample Name^:	GLC-NP-306A-18-C-DC-COMP/GLC-NP-306A-18-C-DC-VOC-7		GLC-WASHPSSED10 2221-DC-COMP/GLC-WASHPSSED10 2221-DC-VOC-3		GLC-WSPTOPCLEAN-DC-COMP/GLC-WSPTOPCLEAN-DC-VOC-7		GLC-NP-318B-02-DC-COMP/GLC-NP-318B-02-DC-VOC-4		GLC-WASHPS20211213-DC-COMP/GLC-WASHPS20211213-DC-VOC-06		GLC-WASHPUMP20210805RU-COMP/GLC-WASHPUMP20210805RU-VOC (5)	
						Lab Sample ID^^:	L2154830-05/06/L2155291-02		L2161496-01/02		L2158092-01/02		L2162117-01/02		L2170050-01/02		L2201603-01/02	
						Sample Depth:	N/A/7 ft		N/A/3 ft		N/A/7 ft		N/A/4 ft		N/A/6 ft		N/A/5 ft	
						Sample Date:	10/7/2021		11/9/2021		10/22/2021		11/11/2021		12/20/2021		1/12/2022	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*													
Pesticides																		
	Delta-BHC	mg/kg	10	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Lindane	mg/kg	0.003	NS	NS		0.00588	U	0.00108	U	0.000587	U	0.000577	U	0.00198	U	0.000771	U
	Alpha-BHC	mg/kg	50	NS	NS		0.00735	U	0.00136	U	0.000733	U	0.000721	U	0.00247	U	0.000964	U
	Beta-BHC	mg/kg	10	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Heptachlor	mg/kg	0.3	NS	NS		0.00882	U	0.00163	U	0.000880	U	0.000866	U	0.00297	U	0.00116	U
	Aldrin	mg/kg	0.08	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Heptachlor epoxide	mg/kg	0.1	NS	NS		0.0331	U	0.00610	U	0.00330	U	0.00325	U	0.0111	U	0.00434	U
	Endrin	mg/kg	10	NS	NS		0.00735	U	0.00136	U	0.000733	U	0.000721	U	0.00247	U	0.000964	U
	Endrin ketone	mg/kg	10	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Dieldrin	mg/kg	0.08	NS	NS		0.0110	U	0.00203	U	0.00110	U	0.00108	U	0.00371	U	0.00144	U
	4,4'-DDE	mg/kg	6	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	4,4'-DDD	mg/kg	8	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	4,4'-DDT	mg/kg	6	NS	NS		**0.0397**		**0.00652**		0.00330	U	**0.00342**	**IP**	0.0111	U	0.00434	U
	Endosulfan I	mg/kg	0.5	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Endosulfan II	mg/kg	0.5	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Endosulfan sulfate	mg/kg	0.5	NS	NS		0.00735	U	0.00136	U	0.000733	U	0.000721	U	0.00247	U	0.000964	U
	Methoxychlor	mg/kg	200	NS	NS		0.0331	U	0.00610	U	0.00330	U	0.00325	U	0.0111	U	0.00434	U
	Chlordane	mg/kg	0.7	NS	NS		0.147	U	0.0271	U	0.0147	U	0.0144	U	0.0495	U	0.0193	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS		0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
Herbicides																		
	MCPP	mg/kg	NS	NS	NS		3.7	U	7	U	3.8	U	3.7	U	4.5	U	4.7	U
	MCPA	mg/kg	100	NS	NS		3.7	U	7	U	3.8	U	3.7	U	4.5	U	4.7	U
	Dalapon	mg/kg	1,000	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	Dicamba	mg/kg	500	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	Dichloroprop	mg/kg	NS	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4-D	mg/kg	100	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4-DB	mg/kg	100	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4,5-T	mg/kg	100	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS		0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
TPH																		
	Total Petroleum Hydrocarbons	mg/kg	1,000	2,500	5,000		**4,340**		**174**		**408**		**120**		**2,160**		**770**	
Metals, total																		
	Antimony	mg/kg	20	NS	NS		2.19	U	4.18	U	2.24	U	2.13	U	2.59	U	2.82	U
	Arsenic	mg/kg	20	40	40		**5.36**		**9.18**		**3.44**		**3.85**		**5.11**		**5.55**	
	Barium	mg/kg	1,000	NS	NS		**38.0**		**92.1**		**24.1**		**35.8**		**39.8**		**53.4**	
	Beryllium	mg/kg	90	NS	NS		**0.237**		**0.619**		**0.287**		**0.255**		**0.301**		**0.366**	
	Cadmium	mg/kg	70	30	80		**0.657**		**1.08**		0.449	U	0.425	U	0.518	U	0.564	U
	Chromium	mg/kg	100	1,000	1,000		**12.1**		**37.3**		**16.0**		**12.7**		**16.9**		**20.3**	
	Lead	mg/kg	200	1,000	2,000		**134**		**80.9**		**38.9**		**60.5**		**91.7**		**72.9**	
	Mercury	mg/kg	20	10	10		**0.187**		0.152	U	**0.093**		**0.191**		**0.445**		**0.207**	
	Nickel	mg/kg	600	NS	NS		**9.30**		**25.9**		**10.9**		**10.2**		**12.2**		**14.5**	
	Selenium	mg/kg	400	NS	NS		2.19	U	4.18	U	2.24	U	2.13	U	2.59	U	2.82	U
	Silver	mg/kg	100	NS	NS		0.438	U	0.837	U	0.449	U	0.425	U	0.518	U	0.564	U
	Thallium	mg/kg	8	NS	NS		2.19	U	4.18	U	2.24	U	2.13	U	2.59	U	2.82	U
	Vanadium	mg/kg	400	NS	NS		**22.9**		**50.1**		**29.8**		**16.6**		**24.6**		**27.6**	
	Zinc	mg/kg	1,000	NS	NS		**160**		**148**		**67.6**		**62.6**		**96.5**		**101**	
Metals, TCLP																		
	Lead	mg/L	5**	NS	NS		0.500	U	NA		NA		NA		NA		NA	
General Chemistry																		
	Ignitability		NS	NS	NS		NI		NI		NI		NI		NI		NI	
	Specific Conductance	umhos/cm	NS	4,000	8,000		**110**		**110**		**68**		**93**		**110**		**86**	
	pH	su	NS	2 - 12.5	2 - 12.5		**7.6**		**8.2**		**8.0**		**8.2**		**7.4**		**7.4**	
	Reactive Cyanide	mg/kg	NS	< 250	< 250		10	U	10	U	10	U	10	U	10	U	10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500		10	U	10	U	10	U	10	U	10	U	10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

** - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

RC - Reportable concentration.

TPH - Total Petroleum Hydrocarbons.

(1) - Value for C9-C10 aromatics used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - Value for Dichloropropane used.

(4) - Value for Dichloropropene used.

(5) - Value for Chlorotoluene used.

^ - Sample name for Other/VOC analysis.

^^ - Lab Sample ID for Other/VOC/TCLP analysis; otherwise Lab Sample ID applied to Other/VOC analysis.

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
132 Washington Street
Somerville, Massachusetts
Release Tracking Number 3-34742
March 2022 - August 2022

											LOCATION	GLC-WASHPUMPGAS030222-DC-COMP		GLC-WASHPUMPGAS030222-DC-VOC(1)	
											SAMPLING DATE	3/11/2022		3/11/2022	
											LAB SAMPLE ID	22C1091-01		22C1091-02	
											SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
General Chemistry															
	Specific Conductance @ 25 C	SC					8000	4000	2000		umhos/cm	30		-	-
	Solids, Total	TSOLIDS									%	87.0		87.0	
	pH (H)	12408-02-5							5-9	2-12.5	SU	8.8		-	-
	Cyanide, Reactive	GIS-250-012							250	250	mg/kg	3.9	U	-	-
	Sulfide, Reactive	RSULF							500	500	mg/kg	19	U	-	-
Ignitability of Solids															
	Ignitability	IGNIT							>140°	NI		Absent		-	-
MCP Chlorinated Herbicides															
	2,4-D	94-75-7		100	1000				10		mg/kg	0.11	U	-	-
	2,4-DB	94-82-6		100	1000				10		mg/kg	0.11	U	-	-
	2,4,5-TP (Silvex)	93-72-1		100	1000				10		mg/kg	0.011	U	-	-
	2,4,5-T	93-76-5		100	1000				10		mg/kg	0.011	U	-	-
	Dalapon	75-99-0		1000	10000				100		mg/kg	0.29	U	-	-
	Dicamba	1918-00-9		500	5000				50		mg/kg	0.011	U	-	-
	Dichloroprop	120-36-5							0.08		mg/kg	0.11	U	-	-
	MCPA	94-74-6		100	1000				10		mg/kg	11	U	-	-
	MCPP	93-65-2							3.3		mg/kg	11	U	-	-
MCP Organochlorine Pesticides															
	Aldrin	309-00-2		0.08	0.5	0.7			0.05		mg/kg	0.11	U	-	-
	Alpha-BHC	319-84-6		50	500				5		mg/kg	0.11	U	-	-
	Beta-BHC	319-85-7		10	100				1		mg/kg	0.11	U	-	-
	Delta-BHC	319-86-8		10	100				1		mg/kg	0.11	U	-	-
	Lindane	58-89-9		0.003	0.5	0.46			0.0003		mg/kg	0.046	U	-	-
	Chlordane	57-74-9		0.7	30	27			0.07		mg/kg	0.46	U	-	-
	4,4'-DDD	72-54-8		8	40	14			0.8		mg/kg	0.092	U	-	-
	4,4'-DDE	72-55-9		6	30	14			0.6		mg/kg	0.092	U	-	-
	4,4'-DDT	50-29-3		6	30	14			0.6		mg/kg	0.092	U	-	-
	Dieldrin	60-57-1		0.08	0.5	1			0.05		mg/kg	0.092	U	-	-
	Endosulfan I	959-98-8		0.5	1	1.2			0.05		mg/kg	0.11	U	-	-
	Endosulfan II	33213-65-9		0.5	1	1.2			0.05		mg/kg	0.18	U	-	-
	Endosulfan sulfate	1031-07-8							0.008		mg/kg	0.18	U	-	-
	Endrin	72-20-8		10	20	7			1		mg/kg	0.18	U	-	-
	Endrin ketone	53494-70-5							0.008		mg/kg	0.18	U	-	-
	Heptachlor	76-44-8		0.3	2	4.2			0.03		mg/kg	0.11	U	-	-
	Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.01		mg/kg	0.11	U	-	-
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.8	mg/kg	0.14	U	-	-
	Methoxychlor	72-43-5		200	400	140			20		mg/kg	1.1	U	-	-
MCP Polychlorinated Biphenyls															
	Aroclor 1016	12674-11-2		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1221	11104-28-2		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1232	11141-16-5		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1242	53469-21-9		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1248	12672-29-6		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1254	11097-69-1		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1260	11096-82-5		1	4	1.6				4	mg/kg	0.092	U	-	-
	Aroclor 1262	37324-23-5		1	4	1.6					mg/kg	0.092	U	-	-
	Aroclor 1268	11100-14-4		1	4	1.6					mg/kg	0.092	U	-	-
	PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	4	mg/kg	0.092	U	-	-
MCP Semivolatile Organics															
	Biphenyl	92-52-4		0.05	6				0.005			0.77	U		
	Acenaphthene	83-32-9	0.5	4	3000	5000			4	69	mg/kg	0.099	J	-	-
	Acenaphthylene	208-96-8	0.5	1	10	14			1	10	mg/kg	0.16	J	-	-
	Acetophenone	98-86-2		1000	10000				100	2500	mg/kg	0.39	U	-	-
	Aniline	62-53-3		1000	10000				100	2500	mg/kg	0.39	U	-	-
	Anthracene	120-12-7	1	1000	3000	5000			1000	2500	mg/kg	0.43		-	-
	Benzo(a)anthracene	56-55-3	2	7	40	160			7	40	mg/kg	1.2		-	-
	Benzo(a)pyrene	50-32-8	2	2	7	16			2	7	mg/kg	1.3		-	-
	Benzo(b)fluoranthene	205-99-2	2	7	40	160			7	40	mg/kg	1.5		-	-
	Benzo(ghi)perylene	191-24-2	1	1000	3000	5000			1000	2500	mg/kg	0.64		-	-
	Benzo(k)fluoranthene	207-08-9	1	70	400	1600			70	400	mg/kg	0.61		-	-
	Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	2500	mg/kg	0.39	U	-	-
	Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.7	mg/kg	0.39	U	-	-
	Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.7	mg/kg	0.39	U	-	-
	Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	600	mg/kg	0.39	U	-	-
	4-Bromophenyl phenyl ether	101-55-3		100	1000				10	500	mg/kg	0.39	U	-	-
	Butyl benzyl phthalate	85-68-7		100	1000				10	500	mg/kg	0.39	U	-	-
	4-Chloroaniline	106-47-8		1	3	3.3			0.1	3	mg/kg	0.76	U	-	-
	2-Chloronaphthalene	91-58-7		1000	10000				100	2500	mg/kg	0.39	U	-	-
	2-Chlorophenol	95-57-8		0.7	100	310			0.1	7	mg/kg	0.39	U	-	-
	Chrysene	218-01-9	2	70	400	3400			70	400	mg/kg	1.2		-	-
	Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16			0.7	4	mg/kg	0.19	J	-	-
	Dibenzofuran	132-64-9		100	1000				100	500	mg/kg	0.15	J	-	-
	Di-n-butylphthalate	84-74-2		50	500				5	375	mg/kg	0.39	U	-	-
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	90	mg/kg	0.39	U	-	-
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	30	mg/kg	0.39	U	-	-
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	1	mg/kg	0.39	U	-	-
	3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	20	mg/kg	0.2	U	-	-
	2,4-Dichlorophenol	120-83-2		0.7	40	40			0.1	7	mg/kg	0.39	U	-	-
	Diethyl phthalate	84-66-2		10	200	290			1	75	mg/kg	0.39	U	-	-
	2,4-Dimethylphenol	105-67-9		0.7	100	1300			0.1	7	mg/kg	0.39	U	-	-
	Dimethyl phthalate	131-11-3		0.7	50	550			0.1	7	mg/kg	0.39	U	-	-
	2,4-Dinitrophenol	51-28-5		3	50	45			0.3	30	mg/kg	0.76	U	-	-
	2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	7	mg/kg	0.39	U	-	-
	2,6-Dinitrotoluene	606-20-2		100	1000				10	500	mg/kg	0.39	U	-	-
	Di-n-octylphthalate	117-84-0		1000	10000				100	2500	mg/kg	0.39	U	-	-
	Azobenzene	103-33-3		50	500				5	375	mg/kg	0.39	U	-	-
	Fluoranthene	206-44-0	4	1000	3000	5000			1000	2500	mg/kg	2.2		-	-
	Fluorene	86-73-7	1	1000	3000	5000			1000	2500	mg/kg	0.18	J	-	-

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
132 Washington Street
Somerville, Massachusetts
Release Tracking Number 3-34742
March 2022 - August 2022

											LOCATION	GLC-WASHPUMPGAS030222-DC-COMP		GLC-WASHPUMPGAS030222-DC-VOC(1)	
											SAMPLING DATE	3/11/2022		3/11/2022	
											LAB SAMPLE ID	22C1091-01		22C1091-02	
											SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.8	mg/kg	0.39	U	-	-
	Hexachlorobutadiene	87-68-3		30	100	54			3	100	mg/kg	0.39	U	-	-
	Hexachloroethane	67-72-1		0.7	3	74			0.1	3	mg/kg	0.39	U	-	-
	Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160			7	40	mg/kg	0.70		-	-
	Isophorone	78-59-1		100	1000				10	500	mg/kg	0.39	U	-	-
	2-Methylnaphthalene	91-57-6	0.5	0.7	80	240			0.7	25	mg/kg	0.18	J	-	-
	2-Methylphenol	95-48-7		500	5000				50	2500	mg/kg	0.39	U	-	-
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000				50	2500	mg/kg	0.39	U	-	-
	Naphthalene	91-20-3	0.5	4	20	3000			4	20	mg/kg	0.32		-	-
	Nitrobenzene	98-95-3		500	5000				50	2500	mg/kg	0.39	U	-	-
	2-Nitrophenol	88-75-5		100	1000				10	500	mg/kg	0.39	U	-	-
	4-Nitrophenol	100-02-7		100	1000				10	500	mg/kg	0.76	U	-	-
	Pentachlorophenol	87-86-5		3	10	13			0.3	10	mg/kg	0.39	U	-	-
	Phenanthrene	85-01-8	3	10	1000	3000			10	532.5	mg/kg	1.2		-	-
	Phenol	108-95-2		1	20	16			0.1	10	mg/kg	0.39	U	-	-
	Pyrene	129-00-0	4	1000	3000	5000			1000	2500	mg/kg	2.3		-	-
	Pyridine	110-86-1		500	5000				50		mg/kg	0.39	U	-	-
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	6	mg/kg	0.39	U	-	-
	2,4,5-Trichlorophenol	95-95-4		4	600	580			0.4	40	mg/kg	0.39	U	-	-
	2,4,6-Trichlorophenol	88-06-2		0.7	20	19			0.1	7	mg/kg	0.39	U	-	-
	Total SVOCs						100	100			mg/kg	14.559	J	-	-
MCP Total Metals															
	Antimony, Total	7440-36-0	1	20	30	16			20	30	mg/kg	1.9	U	-	-
	Arsenic, Total	7440-38-2	20	20	20	11	40	40	20	20	mg/kg	4.1		-	-
	Barium, Total	7440-39-3	50	1000	3000	2100			1000	2500	mg/kg	38		-	-
	Beryllium, Total	7440-41-7	0.4	90	200	10			90	200	mg/kg	0.38		-	-
	Cadmium, Total	7440-43-9	2	70	100	16	80	30	70	100	mg/kg	0.38	U	-	-
	Chromium, Total	7440-47-3	30	100	200	570	1000	1000	100	200	mg/kg	23		-	-
	Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	600	mg/kg	32		-	-
	Mercury, Total	7439-97-6	0.3	20	30	16	10	10	20	30	mg/kg	0.17		-	-
	Nickel, Total	7440-02-0	20	600	1000	350			600	1000	mg/kg	19		-	-
	Selenium, Total	7782-49-2	0.5	400	700	390			400	700	mg/kg	3.8	U	-	-
	Silver, Total	7440-22-4	0.6	100	200	110			100	200	mg/kg	0.38	U	-	-
	Thallium, Total	7440-28-0	0.6	8	60	37			8	60	mg/kg	1.9	U	-	-
	Vanadium, Total	7440-62-2	30	400	700	530			400	700	mg/kg	42		-	-
	Zinc, Total	7440-66-6	100	1000	3000	5000			1000	2500	mg/kg	65		-	-
MCP Volatile Organics by EPA 5035															
	Acetone	67-64-1		6	50	350			0.6	50	mg/kg	-	-	0.074	U
	Tertiary-Amyl Methyl Ether	994-05-8							0.01		mg/kg	-	-	0.00074	U
	Benzene	71-43-2		2	200	540			0.2	20	mg/kg	-	-	0.0015	U
	Bromobenzene	108-86-1		100	1000				10	500	mg/kg	-	-	0.0015	U
	Bromochloromethane	74-97-5							0.01		mg/kg	-	-	0.0015	U
	Bromodichloromethane	75-27-4		0.1	0.1	460			0.1	0.1	mg/kg	-	-	0.0015	U
	Bromoform	75-25-2		0.1	1	800			0.1	1	mg/kg	-	-	0.0015	U
	Bromomethane	74-83-9		0.5	0.5	32			0.1	0.5	mg/kg	-	-	0.0074	U
	Methyl ethyl ketone	78-93-3		4	50	350			0.4	40	mg/kg	-	-	0.029	U
	n-Butylbenzene	104-51-8							0.01	500	mg/kg	-	-	0.0015	U
	sec-Butylbenzene	135-98-8							0.01	500	mg/kg	-	-	0.0015	U
	tert-Butylbenzene	98-06-6		100	1000				10	500	mg/kg	-	-	0.0015	U
	Ethyl-Tert-Butyl-Ether	637-92-3							0.01		mg/kg	-	-	0.00074	U
	Carbon disulfide	75-15-0		100	1000				10	500	mg/kg	-	-	0.0074	U
	Carbon tetrachloride	56-23-5		5	5	220			0.5	5	mg/kg	-	-	0.0015	U
	Chlorobenzene	108-90-7		1	3	110			0.1	3	mg/kg	-	-	0.0015	U
	Dibromochloromethane	124-48-1		0.005	0.03	340			0.0005	0.03	mg/kg	-	-	0.00074	U
	Chloroethane	75-00-3		100	1000				10	500	mg/kg	-	-	0.015	U
	Chloroform	67-66-3		0.2	0.2	410			0.1	0.2	mg/kg	-	-	0.0029	U
	Chloromethane	74-87-3		100	1000				10	500	mg/kg	-	-	0.0074	U
	o-Chlorotoluene	95-49-8		100	1000				10	500	mg/kg	-	-	0.0015	U
	p-Chlorotoluene	106-43-4							0.01	500	mg/kg	-	-	0.0015	U
	1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	75	mg/kg	-	-	0.0015	U
	1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.1	mg/kg	-	-	0.00074	U
	Dibromomethane	74-95-3		500	5000				50	2500	mg/kg	-	-	0.0015	U
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	90	mg/kg	-	-	0.0015	U
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	30	mg/kg	-	-	0.0015	U
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	1	mg/kg	-	-	0.0015	U
	Dichlorodifluoromethane	75-71-8		1000	10000				100	2500	mg/kg	-	-	0.015	U
	1,1-Dichloroethane	75-34-3		0.4	9	1300			0.1	4	mg/kg	-	-	0.0015	U
	1,2-Dichloroethane	107-06-2		0.1	0.1	310			0.1	0.1	mg/kg	-	-	0.0015	U
	1,1-Dichloroethene	75-35-4		3	40	1600			0.3	30	mg/kg	-	-	0.0029	U
	cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.1	mg/kg	-	-	0.0015	U
	trans-1,2-Dichloroethene	156-60-5		1	1	2500			0.1	1	mg/kg	-	-	0.0015	U
	1,2-Dichloropropane	78-87-5		0.1	0.1	280			0.1	0.1	mg/kg	-	-	0.0015	U
	1,3-Dichloropropane	142-28-9		500	5000				50	2500	mg/kg	-	-	0.00074	U
	2,2-Dichloropropane	594-20-7							0.01	0.1	mg/kg	-	-	0.0015	U
	1,1-Dichloropropene	563-58-6							0.01	0.1	mg/kg	-	-	0.0015	U
	cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140			0.001	0.1	mg/kg	-	-	0.00074	U
	trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140			0.001	0.1	mg/kg	-	-	0.00074	U
	Diethyl ether	60-29-7		100	1000				10	500	mg/kg	-	-	0.015	U
	Diisopropyl Ether	108-20-3		100	1000				10	500	mg/kg	-	-	0.00074	U
	1,4-Dioxane	123-91-1		0.2	6	450			0.1	2	mg/kg	-	-	0.074	U
	Ethylbenzene	100-41-4		40	1000	230			4	300	mg/kg	-	-	0.0015	U
	Hexachlorobutadiene	87-68-3		30	100	54			3	100	mg/kg	-	-	0.0015	U
	2-Hexanone	591-78-6		100	1000				10	500	mg/kg	-	-	0.015	U
	Isopropylbenzene	98-82-8		1000	10000				100	2500	mg/kg	-	-	0.0015	U
	p-Isopropyltoluene	99-87-6		100	1000				10	500	mg/kg	-	-	0.0015	U
	Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	1.9	mg/kg	-	-	0.0029	U
	Methylene chloride	75-09-2		0.1	4	900			0.1	1	mg/kg	-	-	0.015	U
	Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	4	mg/kg	-	-	0.015	U
	Naphthalene	91-20-3	0.5	4	20	3000			4	20	mg/kg	-	-	0.0029	U

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
132 Washington Street
Somerville, Massachusetts
Release Tracking Number 3-34742
March 2022 - August 2022

											LOCATION	GLC-WASHPUMPGAS030222-DC-COMP		GLC-WASHPUMPGAS030222-DC-VOC(1)	
											SAMPLING DATE	3/11/2022		3/11/2022	
											LAB SAMPLE ID	22C1091-01		22C1091-02	
											SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	n-Propylbenzene	103-65-1		100	1000				10	500	mg/kg	-	-	0.0015	U
	Styrene	100-42-5		3	4	630			0.3	4	mg/kg	-	-	0.0015	U
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.1	mg/kg	-	-	0.0015	U
	1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19			0.0005	0.02	mg/kg	-	-	0.00074	U
	Tetrachloroethene	127-18-4		1	10	370			0.1	10	mg/kg	-	-	0.0085	
	Tetrahydrofuran	109-99-9		500	5000				50	2500	mg/kg	-	-	0.0074	U
	Toluene	108-88-3		30	1000	520			3	225	mg/kg	-	-	0.0015	U
	1,2,3-Trichlorobenzene	87-61-6							0.01		mg/kg	-	-	0.0015	U
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	6	mg/kg	-	-	0.0015	U
	1,1,1-Trichloroethane	71-55-6		30	600	1400			3	225	mg/kg	-	-	0.0015	U
	1,1,2-Trichloroethane	79-00-5		0.1	2	91			0.1	1	mg/kg	-	-	0.0015	U
	Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.3	mg/kg	-	-	0.0015	U
	Trichlorofluoromethane	75-69-4		1000	10000				100	2500	mg/kg	-	-	0.0074	U
	1,2,3-Trichloropropane	96-18-4		100	1000				10	500	mg/kg	-	-	0.0015	U
	1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	2500	mg/kg	-	-	0.0015	U
	1,3,5-Trimethylbenzene	108-67-8		10	100				1	75	mg/kg	-	-	0.0015	U
	Vinyl chloride	75-01-4		0.7	0.7	12			0.1	0.7	mg/kg	-	-	0.0074	U
	p/m-Xylene	179601-23-1		100	100	270			10	100	mg/kg	-	-	0.0029	U
	o-Xylene	95-47-6		100	100	270			10	100	mg/kg	-	-	0.0015	U
	Total VOCs						10	4			mg/kg	-	-	0.0085	
Petroleum Hydrocarbon Quantitation															
	TPH (C9-C36)	TPHC9-C36		1000	3000	500	5000	2500	500	2500	mg/kg	760		-	-

Yellow shading indicates detected result is equal to or above one or more of the listed criteria, except for MA Background Level Natural soil.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria, except for MA Background Level Natural soil.
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.
BUD-S3/G3: MassDEP Proposed S3, GW-3 Beneficial Use Determination (BUD) Values Criteria per Draft Interim Guidance Document effective March 18, 2004.
MA-BLNS: Background Level Natural soil current as of 10/24/07
MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
TRC-SSSR-GLX: Site Specific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Project Criteria per client-provided Table X February 21, 2018.
Saugus: Acceptance Criteria for Aggregate Industries - Saugus Quarry, Table 1.
U - Not detected at the reported detection limit for the sample.
J - Estimated value.

Table 2 - 2022 Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
July 27, 2022

											LOCATION	GLC-WASHPUMPGRADING-062322-DC-VOC(7)		GLC-WASHPUMPGRADING-062322-DC-COMP	
											SAMPLING DATE	7/27/2022		7/27/2022	
											LAB SAMPLE ID	L2240165-01		L2240165-02	
											SAMPLE TYPE	SOIL		SOIL	
											REUSE/DISPOSAL FACILITY	MA Unlined Landfill		MA Unlined Landfill	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
General Chemistry															
	Specific Conductance @ 25 C	NONE					8000	4000	2000	2000		umhos/cm	-	-	200	
	Solids, Total	NONE										%	98.1		96.6	
	pH (H)	12408-02-5							5-9	5-9	2-12.5	SU	-	-	8	
	Cyanide, Reactive	57-12-5							250	250	250	mg/kg	-	-	10	U
	Sulfide, Reactive	NONE							500	500	500	mg/kg	-	-	10	U
Ignitability of Solids																
	Ignitability	NONE							>140°	Not Ignitable (NI)	NI		-	-	NI	
MCP Chlorinated Herbicides																
	MCPP	93-65-2							3.3			mg/kg	-	-	3.4	U
	MCPA	94-74-6		100	1000				10	100		mg/kg	-	-	3.4	U
	Dalapon	75-99-0		1000	10000				100	1000		mg/kg	-	-	0.034	U
	Dicamba	1918-00-9		500	5000				50	500		mg/kg	-	-	0.034	U
	Dichloroprop	120-36-5							0.08			mg/kg	-	-	0.034	U
	2,4-D	94-75-7		100	1000				10	100		mg/kg	-	-	0.034	U
	2,4-DB	94-82-6		100	1000				10	100		mg/kg	-	-	0.034	U
	2,4,5-T	93-76-5		100	1000				10	100		mg/kg	-	-	0.034	U
	2,4,5-TP (Silvex)	93-72-1		100	1000				10	100		mg/kg	-	-	0.034	U
MCP Organochlorine Pesticides																
	Delta-BHC	319-86-8		10	100				1	10		mg/kg	-	-	0.00159	U
	Lindane	58-89-9		0.003	0.5	0.46			0.0003	0.05		mg/kg	-	-	0.00053	U
	Alpha-BHC	319-84-6		50	500				5	50		mg/kg	-	-	0.000663	U
	Beta-BHC	319-85-7		10	100				1	10		mg/kg	-	-	0.00159	U
	Heptachlor	76-44-8		0.3	2	4.2			0.05	0.2		mg/kg	-	-	0.000796	U
	Aldrin	309-00-2		0.08	0.5	0.7			0.05	0.05		mg/kg	-	-	0.00159	U
	Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.05	0.09		mg/kg	-	-	0.00298	U
	Endrin	72-20-8		10	20	7			1	2		mg/kg	-	-	0.000663	U
	Endrin ketone	53494-70-5							0.008			mg/kg	-	-	0.00159	U
	Dieldrin	60-57-1		0.08	0.5	1			0.05	0.05		mg/kg	-	-	0.000995	U
	4,4'-DDE	72-55-9		6	30	14			0.6	3		mg/kg	-	-	0.00159	U
	4,4'-DDD	72-54-8		8	40	14			0.8	4		mg/kg	-	-	0.00159	U
	4,4'-DDT	50-29-3		6	30	14			0.6	3		mg/kg	-	-	0.00298	U
	Endosulfan I	959-98-8		0.5	1	1.2			0.05	0.1		mg/kg	-	-	0.00159	U
	Endosulfan II	33213-65-9		0.5	1	1.2			0.05	0.1		mg/kg	-	-	0.00159	U
	Endosulfan sulfate	1031-07-8							0.008			mg/kg	-	-	0.000663	U
	Methoxychlor	72-43-5		200	400	140			20	40		mg/kg	-	-	0.00298	U
	Chlordane	57-74-9		0.7	30	27			0.07	3		mg/kg	-	-	0.0133	U
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.08	0.8	mg/kg	-	-	0.00159	U
MCP Polychlorinated Biphenyls																
	Aroclor 1016	12674-11-2		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1221	11104-28-2		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1232	11141-16-5		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1242	53469-21-9		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1248	12672-29-6		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1254	11097-69-1		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1260	11096-82-5		1	4	1.6					4	mg/kg	-	-	0.0326	U
	Aroclor 1262	37324-23-5		1	4	1.6						mg/kg	-	-	0.0326	U
	Aroclor 1268	11100-14-4		1	4	1.6						mg/kg	-	-	0.0326	U
	PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	0.1	4	mg/kg	-	-	0.0326	U
MCP Semivolatile Organics																
	Acenaphthene	83-32-9	0.5	4	3000	5000			4	5	69	mg/kg	-	-	0.45	
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.6	6	mg/kg	-	-	0.17	U
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.08	0.8	mg/kg	-	-	0.071	U
	Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.07	0.7	mg/kg	-	-	0.071	U
	2-Chloronaphthalene	91-58-7		1000	10000				100	100	2500	mg/kg	-	-	0.17	U
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	10	90	mg/kg	-	-	0.17	U
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	20	30	mg/kg	-	-	0.17	U
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.1	1	mg/kg	-	-	0.071	U
	3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	2	20	mg/kg	-	-	0.17	U
	2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	1	7	mg/kg	-	-	0.071	U
	2,6-Dinitrotoluene	606-20-2		100	1000				10	100	500	mg/kg	-	-	0.17	U
	Azobenzene	103-33-3		50	500				5	50	375	mg/kg	-	-	0.17	U
	Fluoranthene	206-44-0	4	1000	3000	5000			1000	40	2500	mg/kg	-	-	6	
	4-Bromophenyl phenyl ether	101-55-3		100	1000				10	100	500	mg/kg	-	-	0.17	U
	Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.07	0.7	mg/kg	-	-	0.071	U
	Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	100	2500	mg/kg	-	-	0.18	U
	Hexachlorobutadiene	87-68-3		30	100	54			3	10	100	mg/kg	-	-	0.17	U
	Hexachloroethane	67-72-1		0.7	3	74			0.1	0.3	3	mg/kg	-	-	0.071	U
	Isophorone	78-59-1		100	1000				10	100	500	mg/kg	-	-	0.15	U
	Naphthalene	91-20-3	0.5	4	20	3000			4	5	20	mg/kg	-	-	1.4	
	Nitrobenzene	98-95-3		500	5000				50	100	2500	mg/kg	-	-	0.15	U
	Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	60	600	mg/kg	-	-	0.17	U
	Butyl benzyl phthalate	85-68-7		100	1000				10	100	500	mg/kg	-	-	0.17	U
	Di-n-butylphthalate	84-74-2		50	500				5	50	375	mg/kg	-	-	0.17	U
	Di-n-octylphthalate	117-84-0		1000	10000				100	100	2500	mg/kg	-	-	0.17	U

Table 2 - 2022 Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
July 27, 2022

											LOCATION	GLC-WASHPUMPGRADING-062322-DC-VOC(7)		GLC-WASHPUMPGRADING-062322-DC-COMP	
											SAMPLING DATE	7/27/2022		7/27/2022	
											LAB SAMPLE ID	L2240165-01		L2240165-02	
											SAMPLE TYPE	SOIL		SOIL	
											REUSE/DISPOSAL FACILITY	MA Unlined Landfill		MA Unlined Landfill	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	Diethyl phthalate	84-66-2		10	200	290			1	20	75	mg/kg	-	-	0.17	U
	Dimethyl phthalate	131-11-3		0.7	50	550			0.1	5	7	mg/kg	-	-	0.071	U
	Benzo(a)anthracene	56-55-3	2	7	40	160			7	20	40	mg/kg	-	-	3.7	
	Benzo(a)pyrene	50-32-8	2	2	7	16			2	7	7	mg/kg	-	-	4.6	
	Benzo(b)fluoranthene	205-99-2	2	7	40	160			7	20	40	mg/kg	-	-	4.8	
	Benzo(k)fluoranthene	207-08-9	1	70	400	1600			70	10	400	mg/kg	-	-	1.6	
	Chrysene	218-01-9	2	70	400	3400			70	20	400	mg/kg	-	-	3.7	
	Acenaphthylene	208-96-8	0.5	1	10	14			1	5	10	mg/kg	-	-	1.4	
	Anthracene	120-12-7	1	1000	3000	5000			1000	10	2500	mg/kg	-	-	2.2	
	Benzo(ghi)perylene	191-24-2	1	1000	3000	5000			1000	10	2500	mg/kg	-	-	2.7	
	Fluorene	86-73-7	1	1000	3000	5000			1000	10	2500	mg/kg	-	-	0.76	
	Phenanthrene	85-01-8	3	10	1000	3000			10	30	532.5	mg/kg	-	-	4.4	
	Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16			0.7	4	4	mg/kg	-	-	0.6	
	Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160			7	10	40	mg/kg	-	-	3.1	
	Pyrene	129-00-0	4	1000	3000	5000			1000	40	2500	mg/kg	-	-	5.9	
	Aniline	62-53-3		1000	10000				100	100	2500	mg/kg	-	-	0.2	U
	4-Chloroaniline	106-47-8		1	3	3.3			0.1	0.3	3	mg/kg	-	-	0.17	U
	Dibenzofuran	132-64-9		100	1000				100	100	500	mg/kg	-	-	0.47	
	2-Methylnaphthalene	91-57-6	0.5	0.7	80	240			0.7	5	25	mg/kg	-	-	0.78	
	Acetophenone	98-86-2		1000	10000				100	100	2500	mg/kg	-	-	0.17	U
	2,4,6-Trichlorophenol	88-06-2		0.7	20	19			0.1	2	7	mg/kg	-	-	0.071	U
	2-Chlorophenol	95-57-8		0.7	100	310			0.1	100	7	mg/kg	-	-	0.071	U
	2,4-Dichlorophenol	120-83-2		0.7	40	40			0.1	4	7	mg/kg	-	-	0.071	U
	2,4-Dimethylphenol	105-67-9		0.7	100	1300			0.1	10	7	mg/kg	-	-	0.071	U
	2-Nitrophenol	88-75-5		100	1000				10	100	500	mg/kg	-	-	0.36	U
	4-Nitrophenol	100-02-7		100	1000				10	100	500	mg/kg	-	-	0.24	U
	2,4-Dinitrophenol	51-28-5		3	50	45			0.3	5	30	mg/kg	-	-	0.81	U
	Pentachlorophenol	87-86-5		3	10	13			0.3	1	10	mg/kg	-	-	0.34	U
	Phenol	108-95-2		1	20	16			0.1	2	10	mg/kg	-	-	0.17	U
	2-Methylphenol	95-48-7		500	5000				50	100	2500	mg/kg	-	-	0.17	U
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000				50	100	2500	mg/kg	-	-	0.24	U
	2,4,5-Trichlorophenol	95-95-4		4	600	580			0.4	60	40	mg/kg	-	-	0.17	U
	Pyridine	110-86-1		500	5000				50	100		mg/kg	-	-	0.18	U
	Biphenyl	92-52-4		0.05	6				0.005	0.6		mg/kg	-	-	0.14	
	Total SVOCs						100	100				mg/kg	-	-	48.7	
MCP Total Metals																
	Antimony, Total	7440-36-0	1	20	30	16			20	10	30	mg/kg	-	-	2.04	U
	Arsenic, Total	7440-38-2	20	20	20	11	40	40	20	20	20	mg/kg	-	-	3.46	
	Barium, Total	7440-39-3	50	1000	3000	2100			1000	375	2500	mg/kg	-	-	22.9	
	Beryllium, Total	7440-41-7	0.4	90	200	10			90	4	200	mg/kg	-	-	0.204	U
	Cadmium, Total	7440-43-9	2	70	100	16	80	30	70	20	100	mg/kg	-	-	0.409	U
	Chromium, Total	7440-47-3	30	100	200	570	1000	1000	100	200	200	mg/kg	-	-	9.94	
	Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	500	600	mg/kg	-	-	43.2	
	Mercury, Total	7439-97-6	0.3	20	30	16	10	10	20	3	30	mg/kg	-	-	0.139	
	Nickel, Total	7440-02-0	20	600	1000	350			600	150	1000	mg/kg	-	-	8	
	Selenium, Total	7782-49-2	0.5	400	700	390			400	5	700	mg/kg	-	-	2.04	U
	Silver, Total	7440-22-4	0.6	100	200	110			100	6	200	mg/kg	-	-	0.409	U
	Thallium, Total	7440-28-0	0.6	8	60	37			8	6	60	mg/kg	-	-	2.04	U
	Vanadium, Total	7440-62-2	30	400	700	530			400	225	700	mg/kg	-	-	18.9	
	Zinc, Total	7440-66-6	100	1000	3000	5000			1000	500	2500	mg/kg	-	-	53.4	
MCP Volatile Organics by EPA 5035																
	Methylene chloride	75-09-2		0.1	4	900			0.1	0.01	1	mg/kg	0.0052	U	-	-
	1,1-Dichloroethane	75-34-3		0.4	9	1300			0.1	0.04	4	mg/kg	0.001	U	-	-
	Chloroform	67-66-3		0.2	0.2	410			0.1	0.02	0.2	mg/kg	0.0016	U	-	-
	Carbon tetrachloride	56-23-5		5	5	220			0.5	0.5	5	mg/kg	0.001	U	-	-
	1,2-Dichloropropane	78-87-5		0.1	0.1	280			0.1	0.01	0.1	mg/kg	0.001	U	-	-
	Dibromochloromethane	124-48-1		0.005	0.03	340			0.0005	0.0005	0.03	mg/kg	0.001	U	-	-
	1,1,2-Trichloroethane	79-00-5		0.1	2	91			0.1	0.01	1	mg/kg	0.001	U	-	-
	Tetrachloroethene	127-18-4		1	10	370			0.1	0.1	10	mg/kg	0.00058		-	-
	Chlorobenzene	108-90-7		1	3	110			0.1	0.1	3	mg/kg	0.00052	U	-	-
	Trichlorofluoromethane	75-69-4		1000	10000				100	100	2500	mg/kg	0.0042	U	-	-
	1,2-Dichloroethane	107-06-2		0.1	0.1	310			0.1	0.01	0.1	mg/kg	0.001	U	-	-
	1,1,1-Trichloroethane	71-55-6		30	600	1400			3	3	225	mg/kg	0.00052	U	-	-
	Bromodichloromethane	75-27-4		0.1	0.1	460			0.1	0.01	0.1	mg/kg	0.00052	U	-	-
	trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140			0.001	0.001	0.1	mg/kg	0.001	U	-	-
	cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140			0.001	0.001	0.1	mg/kg	0.00052	U	-	-
	1,3-Dichloropropene, Total	542-75-6		0.01	0.4	140			0.001		0.1	mg/kg	0.00052	U	-	-
	1,1-Dichloropropene	563-58-6							0.01	0.001	0.1	mg/kg	0.00052	U	-	-
	Bromoform	75-25-2		0.1	1	800			0.1	0.01	1	mg/kg	0.0042	U	-	-
	1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19			0.0005	0.0005	0.02	mg/kg	0.00052	U	-	-
	Benzene	71-43-2		2	200	540			0.2	0.2	20	mg/kg	0.00052	U	-	-
	Toluene	108-88-3		30	1000	520			3	3	225	mg/kg	0.001	U	-	-
	Ethylbenzene	100-41-4		40	1000	230			4	4	300	mg/kg	0.001	U	-	-
	Chloromethane	74-87-3		100	1000				10	10	500	mg/kg	0.0042	U	-	-
	Bromomethane	74-83-9		0.5	0.5	32			0.1	0.05	0.5	mg/kg	0.0021	U	-	-
	Vinyl chloride	75-01-4		0.7	0.7	12			0.1	0.07	0.7	mg/kg	0.001	U	-	-
	Chloroethane	75-00-3		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	1,1-Dichloroethene	75-35-4		3	40	1600			0.3	0.3	30	mg/kg	0.001	U	-	-

Table 2 - 2022 Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
July 27, 2022

											LOCATION	GLC-WASHPUMPGRADING-062322-DC-VOC(7)		GLC-WASHPUMPGRADING-062322-DC-COMP	
											SAMPLING DATE	7/27/2022		7/27/2022	
											LAB SAMPLE ID	L2240165-01		L2240165-02	
											SAMPLE TYPE	SOIL		SOIL	
											REUSE/DISPOSAL FACILITY	MA Unlined Landfill		MA Unlined Landfill	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	trans-1,2-Dichloroethene	156-60-5		1	1	2500			0.1	0.1	1	mg/kg	0.0016	U	-	-
	Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.03	0.3	mg/kg	0.00052	U	-	-
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	0.9	90	mg/kg	0.0021	U	-	-
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	0.3	30	mg/kg	0.0021	U	-	-
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.07	1	mg/kg	0.0021	U	-	-
	Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	0.01	1.9	mg/kg	0.0021	U	-	-
	p/m-Xylene	179601-23-1		100	100	270			10	10	100	mg/kg	0.0021	U	-	-
	o-Xylene	95-47-6		100	100	270			10	10	100	mg/kg	0.001	U	-	-
	Xylenes, Total	1330-20-7		100	100	270			10	10	100	mg/kg	0.001	U	-	-
	cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.01	0.1	mg/kg	0.001	U	-	-
	1,2-Dichloroethene, Total	540-59-0		0.3					0.1		0.4	mg/kg	0.001	U	-	-
	Dibromomethane	74-95-3		500	5000				50	50	2500	mg/kg	0.0021	U	-	-
	1,2,3-Trichloropropane	96-18-4		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	Styrene	100-42-5		3	4	630			0.3	0.3	4	mg/kg	0.001	U	-	-
	Dichlorodifluoromethane	75-71-8		1000	10000				100	100	2500	mg/kg	0.01	U	-	-
	Acetone	67-64-1		6	50	350			0.6	0.6	50	mg/kg	0.049		-	-
	Carbon disulfide	75-15-0		100	1000				10	10	500	mg/kg	0.01	U	-	-
	Methyl ethyl ketone	78-93-3		4	50	350			0.4	0.4	40	mg/kg	0.01	U	-	-
	Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	0.04	4	mg/kg	0.01	U	-	-
	2-Hexanone	591-78-6		100	1000				10	10	500	mg/kg	0.01	U	-	-
	Bromochloromethane	74-97-5							0.01			mg/kg	0.0021	U	-	-
	Tetrahydrofuran	109-99-9		500	5000				50	50	2500	mg/kg	0.0042	U	-	-
	2,2-Dichloropropane	594-20-7							0.01	0.01	0.1	mg/kg	0.0021	U	-	-
	1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.01	0.1	mg/kg	0.001	U	-	-
	1,3-Dichloropropane	142-28-9		500	5000				50	50	2500	mg/kg	0.0021	U	-	-
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.01	0.1	mg/kg	0.00052	U	-	-
	Bromobenzene	108-86-1		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	n-Butylbenzene	104-51-8							0.01		500	mg/kg	0.001	U	-	-
	sec-Butylbenzene	135-98-8							0.01		500	mg/kg	0.001	U	-	-
	tert-Butylbenzene	98-06-6		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	o-Chlorotoluene	95-49-8		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	p-Chlorotoluene	106-43-4							0.01	1	500	mg/kg	0.0021	U	-	-
	1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	1	75	mg/kg	0.0031	U	-	-
	Hexachlorobutadiene	87-68-3		30	100	54			3	3	100	mg/kg	0.0042	U	-	-
	Isopropylbenzene	98-82-8		1000	10000				100	100	2500	mg/kg	0.001	U	-	-
	p-Isopropyltoluene	99-87-6		100	1000				10	10	500	mg/kg	0.001	U	-	-
	Naphthalene	91-20-3	0.5	4	20	3000			4	0.4	20	mg/kg	0.0042	U	-	-
	n-Propylbenzene	103-65-1		100	1000				10	10	500	mg/kg	0.001	U	-	-
	1,2,3-Trichlorobenzene	87-61-6							0.01			mg/kg	0.0021	U	-	-
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.2	6	mg/kg	0.0021	U	-	-
	1,3,5-Trimethylbenzene	108-67-8		10	100				1	1	75	mg/kg	0.0021	U	-	-
	1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	100	2500	mg/kg	0.0021	U	-	-
	Diethyl ether	60-29-7		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	Diisopropyl Ether	108-20-3		100	1000				10	10	500	mg/kg	0.0021	U	-	-
	Ethyl-Tert-Butyl-Ether	637-92-3							0.01			mg/kg	0.0021	U	-	-
	Tertiary-Amyl Methyl Ether	994-05-8							0.01			mg/kg	0.0021	U	-	-
	1,4-Dioxane	123-91-1		0.2	6	450			0.1	0.02	2	mg/kg	0.083	U	-	-
	Total VOCs						10	4				mg/kg	0.04958		-	-
Petroleum Hydrocarbon Quantitation																
	TPH (C10-C36)	NONE		1000	3000	500	5000	2500	500	1000	2500	mg/kg	-	-	980	

Yellow shading indicates detected result is equal to or above one or more of the listed criteria, except for MA Background Level Natural soil.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria, except for MA Background Level Natural soil.

RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.
BUD-S3/G3: MassDEP Proposed S3, GW-3 Beneficial Use Determination (BUD) Values Criteria per Draft Interim Guidance Document effective March 18, 2004.
MA-BLNS: Background Level Natural soil current as of 10/24/07
MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
TRC-SSSR-GLX: Site Specific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Project Criteria per client-provided Table X February 21, 2018.
MA-Dudley <RCS-2 Acceptance Criteria, Revised January 15, 2020.
Saugus: Acceptance Criteria for Aggregate Industries - Saugus Quarry, Table 1.

U - Not detected at the reported detection limit for the sample.

Table 2 - Summary of Soil Sample Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
November 3, 2022

											LOCATION	GLC-WASHSTLANDSCAPE-COMP		GLC-WASHSTLANDSCAPE-VOC(3)	
											SAMPLING DATE	11/3/2022		11/3/2022	
											LAB SAMPLE ID	L2261771-01		L2261771-02	
											SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
General Chemistry																
	Specific Conductance @ 25 C	NONE					8000	4000	2000	2000		umhos/cm	120		-	-
	Solids, Total	NONE										%	92.3		77.6	
	pH (H)	12408-02-5							5-9	5-9	2-12.5	SU	8.3		-	-
	Cyanide, Reactive	57-12-5							250	250	250	mg/kg	10	U	-	-
	Sulfide, Reactive	NONE							500	500	500	mg/kg	10	U	-	-
Ignitability of Solids																
	Ignitability	NONE							>140°	Not Ignitable (NI)	NI		NI		-	-
MCP Chlorinated Herbicides																
	MCPP	93-65-2							3.3			mg/kg	3.5	U	-	-
	MCPA	94-74-6		100	1000				10	100		mg/kg	3.5	U	-	-
	Dalapon	75-99-0		1000	10000				100	1000		mg/kg	0.035	U	-	-
	Dicamba	1918-00-9		500	5000				50	500		mg/kg	0.035	U	-	-
	Dichloroprop	120-36-5							0.08			mg/kg	0.035	U	-	-
	2,4-D	94-75-7		100	1000				10	100		mg/kg	0.035	U	-	-
	2,4-DB	94-82-6		100	1000				10	100		mg/kg	0.035	U	-	-
	2,4,5-T	93-76-5		100	1000				10	100		mg/kg	0.035	U	-	-
	2,4,5-TP (Silvex)	93-72-1		100	1000				10	100		mg/kg	0.035	U	-	-
MCP Organochlorine Pesticides																
	Delta-BHC	319-86-8		10	100				1	10		mg/kg	0.00167	U	-	-
	Lindane	58-89-9		0.003	0.5	0.46			0.0003	0.05		mg/kg	0.000557	U	-	-
	Alpha-BHC	319-84-6		50	500				5	50		mg/kg	0.000697	U	-	-
	Beta-BHC	319-85-7		10	100				1	10		mg/kg	0.00167	U	-	-
	Heptachlor	76-44-8		0.3	2	4.2			0.05	0.2		mg/kg	0.000836	U	-	-
	Aldrin	309-00-2		0.08	0.5	0.7			0.05	0.05		mg/kg	0.00167	U	-	-
	Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.05	0.09		mg/kg	0.00314	U	-	-
	Endrin	72-20-8		10	20	7			1	2		mg/kg	0.000697	U	-	-
	Endrin ketone	53494-70-5							0.008			mg/kg	0.00167	U	-	-
	Dieldrin	60-57-1		0.08	0.5	1			0.05	0.05		mg/kg	0.00104	U	-	-
	4,4'-DDE	72-55-9		6	30	14			0.6	3		mg/kg	0.00167	U	-	-
	4,4'-DDD	72-54-8		8	40	14			0.8	4		mg/kg	0.00167	U	-	-
	4,4'-DDT	50-29-3		6	30	14			0.6	3		mg/kg	0.00314	U	-	-
	Endosulfan I	959-98-8		0.5	1	1.2			0.05	0.1		mg/kg	0.00167	U	-	-
	Endosulfan II	33213-65-9		0.5	1	1.2			0.05	0.1		mg/kg	0.00167	U	-	-
	Endosulfan sulfate	1031-07-8							0.008			mg/kg	0.000697	U	-	-
	Methoxychlor	72-43-5		200	400	140			20	40		mg/kg	0.00314	U	-	-
	Chlordane	57-74-9		0.7	30	27			0.07	3		mg/kg	0.0139	U	-	-
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.08	0.8	mg/kg	0.00167	U	-	-
MCP Polychlorinated Biphenyls																
	Aroclor 1016	12674-11-2		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1221	11104-28-2		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1232	11141-16-5		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1242	53469-21-9		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1248	12672-29-6		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1254	11097-69-1		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1260	11096-82-5		1	4	1.6					4	mg/kg	0.0345	U	-	-
	Aroclor 1262	37324-23-5		1	4	1.6						mg/kg	0.0345	U	-	-
	Aroclor 1268	11100-14-4		1	4	1.6						mg/kg	0.0345	U	-	-
	PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	0.1	4	mg/kg	0.0345	U	-	-
MCP Semivolatile Organics																
	Acenaphthene	83-32-9	0.5	4	3000	5000			4	5	69	mg/kg	0.14	U	-	-
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.6	6	mg/kg	0.18	U	-	-
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.08	0.8	mg/kg	0.074	U	-	-
	Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.07	0.7	mg/kg	0.074	U	-	-
	2-Chloronaphthalene	91-58-7		1000	10000				100	100	2500	mg/kg	0.18	U	-	-
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	10	90	mg/kg	0.18	U	-	-
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	20	30	mg/kg	0.18	U	-	-
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.1	1	mg/kg	0.074	U	-	-
	3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	2	20	mg/kg	0.18	U	-	-
	2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	1	7	mg/kg	0.074	U	-	-
	2,6-Dinitrotoluene	606-20-2		100	1000				10	100	500	mg/kg	0.18	U	-	-
	Azobenzene	103-33-3							0.67	50	375	mg/kg	0.18	U	-	-
	Fluoranthene	206-44-0	4	1000	3000	5000			1000	40	2500	mg/kg	0.59		-	-
	4-Bromophenyl phenyl ether	101-55-3		100	1000				10	100	500	mg/kg	0.18	U	-	-
	Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.07	0.7	mg/kg	0.074	U	-	-
	Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	100	2500	mg/kg	0.19	U	-	-
	Hexachlorobutadiene	87-68-3		30	100	54			3	10	100	mg/kg	0.18	U	-	-
	Hexachloroethane	67-72-1		0.7	3	74			0.1	0.3	3	mg/kg	0.074	U	-	-
	Isophorone	78-59-1		100	1000				10	100	500	mg/kg	0.16	U	-	-
	Naphthalene	91-20-3	0.5	4	20	3000			4	5	20	mg/kg	0.18	U	-	-
	Nitrobenzene	98-95-3		500	5000				50	100	2500	mg/kg	0.16	U	-	-
	Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	60	600	mg/kg	0.18	U	-	-
	Butyl benzyl phthalate	85-68-7		100	1000				10	100	500	mg/kg	0.18	U	-	-
	Di-n-butylphthalate	84-74-2		50	500				5	50	375	mg/kg	0.18	U	-	-
	Di-n-octylphthalate	117-84-0		1000	10000				100	100	2500	mg/kg	0.18	U	-	-
	Diethyl phthalate	84-66-2		10	200	290			1	20	75	mg/kg	0.18	U	-	-
	Dimethyl phthalate	131-11-3		0.7	50	550			0.1	5	7	mg/kg	0.074	U	-	-

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Table 2 - Summary of Soil Sample Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
November 3, 2022

											LOCATION	GLC-WASHSTLANDSCAPE-COMP		GLC-WASHSTLANDSCAPE-VOC(3)	
											SAMPLING DATE	11/3/2022		11/3/2022	
											LAB SAMPLE ID	L2261771-01		L2261771-02	
											SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	Benzo(a)anthracene	56-55-3	2	7	40	160			7	20	40	mg/kg	0.33		-	-
	Benzo(a)pyrene	50-32-8	2	2	7	16			2	7	7	mg/kg	0.47		-	-
	Benzo(b)fluoranthene	205-99-2	2	7	40	160			7	20	40	mg/kg	0.49		-	-
	Benzo(k)fluoranthene	207-08-9	1	70	400	1600			70	10	400	mg/kg	0.18		-	-
	Chrysene	218-01-9	2	70	400	3400			70	20	400	mg/kg	0.35		-	-
	Acenaphthylene	208-96-8	0.5	1	10	14			1	5	10	mg/kg	0.14	U	-	-
	Anthracene	120-12-7	1	1000	3000	5000			1000	10	2500	mg/kg	0.1		-	-
	Benzo(ghi)perylene	191-24-2	1	1000	3000	5000			1000	10	2500	mg/kg	0.29		-	-
	Fluorene	86-73-7	1	1000	3000	5000			1000	10	2500	mg/kg	0.18	U	-	-
	Phenanthrene	85-01-8	3	10	1000	3000			10	30	532.5	mg/kg	0.3		-	-
	Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16			0.7	4	4	mg/kg	0.074	U	-	-
	Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160			7	10	40	mg/kg	0.33		-	-
	Pyrene	129-00-0	4	1000	3000	5000			1000	40	2500	mg/kg	0.6		-	-
	Aniline	62-53-3		1000	10000				100	100	2500	mg/kg	0.21	U	-	-
	4-Chloroaniline	106-47-8		1	3	3.3			0.1	0.3	3	mg/kg	0.18	U	-	-
	Dibenzofuran	132-64-9		100	1000				100	100	500	mg/kg	0.18	U	-	-
	2-Methylnaphthalene	91-57-6	0.5	0.7	80	240			0.7	5	25	mg/kg	0.074	U	-	-
	Acetophenone	98-86-2		1000	10000				100	100	2500	mg/kg	0.18	U	-	-
	2,4,6-Trichlorophenol	88-06-2		0.7	20	19			0.1	2	7	mg/kg	0.074	U	-	-
	2-Chlorophenol	95-57-8		0.7	100	310			0.1	100	7	mg/kg	0.074	U	-	-
	2,4-Dichlorophenol	120-83-2		0.7	40	40			0.1	4	7	mg/kg	0.074	U	-	-
	2,4-Dimethylphenol	105-67-9		0.7	100	1300			0.1	10	7	mg/kg	0.074	U	-	-
	2-Nitrophenol	88-75-5		100	1000				10	100	500	mg/kg	0.38	U	-	-
	4-Nitrophenol	100-02-7		100	1000				10	100	500	mg/kg	0.25	U	-	-
	2,4-Dinitrophenol	51-28-5		3	50	45			0.3	5	30	mg/kg	0.85	U	-	-
	Pentachlorophenol	87-86-5		3	10	13			0.3	1	10	mg/kg	0.35	U	-	-
	Phenol	108-95-2		1	20	16			0.1	2	10	mg/kg	0.18	U	-	-
	2-Methylphenol	95-48-7		500	5000				50	100	2500	mg/kg	0.18	U	-	-
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000				50	100	2500	mg/kg	0.25	U	-	-
	2,4,5-Trichlorophenol	95-95-4		4	600	580			0.4	60	40	mg/kg	0.18	U	-	-
	Pyridine	110-86-1		500	5000				50	100		mg/kg	0.19	U	-	-
	Biphenyl	92-52-4		0.05	6				0.005	0.6		mg/kg	0.035	U	-	-
	Total SVOCs						100	100				mg/kg	4.03		-	-
MCP Total Metals																
	Antimony, Total	7440-36-0	1	20	30	16			20	10	30	mg/kg	2.05	U	-	-
	Arsenic, Total	7440-38-2	20	20	20	11	40	40	20	20	20	mg/kg	6.34		-	-
	Barium, Total	7440-39-3	50	1000	3000	2100			1000	375	2500	mg/kg	37.7		-	-
	Beryllium, Total	7440-41-7	0.4	90	200	10			90	4	200	mg/kg	0.272		-	-
	Cadmium, Total	7440-43-9	2	70	100	16	80	30	70	20	100	mg/kg	0.411	U	-	-
	Chromium, Total	7440-47-3	30	100	200	570	1000	1000	100	200	200	mg/kg	17.3		-	-
	Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	500	600	mg/kg	78.4		-	-
	Mercury, Total	7439-97-6	0.3	20	30	16	10	10	20	3	30	mg/kg	0.137		-	-
	Nickel, Total	7440-02-0	20	600	1000	350			600	150	1000	mg/kg	14.2		-	-
	Selenium, Total	7782-49-2	0.5	400	700	390			400	5	700	mg/kg	2.05	U	-	-
	Silver, Total	7440-22-4	0.6	100	200	110			100	6	200	mg/kg	0.411	U	-	-
	Thallium, Total	7440-28-0	0.6	8	60	37			8	6	60	mg/kg	2.05	U	-	-
	Vanadium, Total	7440-62-2	30	400	700	530			400	225	700	mg/kg	30.3		-	-
	Zinc, Total	7440-66-6	100	1000	3000	5000			1000	500	2500	mg/kg	84.4		-	-
MCP Volatile Organics by EPA 5035																
	Methylene chloride	75-09-2		0.1	4	900			0.1	0.01	1	mg/kg	-	-	0.0055	U
	1,1-Dichloroethane	75-34-3		0.4	9	1300			0.1	0.04	4	mg/kg	-	-	0.0011	U
	Chloroform	67-66-3		0.2	0.2	410			0.1	0.02	0.2	mg/kg	-	-	0.0016	U
	Carbon tetrachloride	56-23-5		5	5	220			0.5	0.5	5	mg/kg	-	-	0.0011	U
	1,2-Dichloropropane	78-87-5		0.1	0.1	280			0.1	0.01	0.1	mg/kg	-	-	0.0011	U
	Dibromochloromethane	124-48-1		0.005	0.03	340			0.0005	0.0005	0.03	mg/kg	-	-	0.0011	U
	1,1,2-Trichloroethane	79-00-5		0.1	2	91			0.1	0.01	1	mg/kg	-	-	0.0011	U
	Tetrachloroethene	127-18-4		1	10	370			0.1	0.1	10	mg/kg	-	-	0.0045	
	Chlorobenzene	108-90-7		1	3	110			0.1	0.1	3	mg/kg	-	-	0.00055	U
	Trichlorofluoromethane	75-69-4		1000	10000				100	100	2500	mg/kg	-	-	0.0044	U
	1,2-Dichloroethane	107-06-2		0.1	0.1	310			0.1	0.01	0.1	mg/kg	-	-	0.0011	U
	1,1,1-Trichloroethane	71-55-6		30	600	1400			3	3	225	mg/kg	-	-	0.00055	U
	Bromodichloromethane	75-27-4		0.1	0.1	460			0.1	0.01	0.1	mg/kg	-	-	0.00055	U
	trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140			0.001	0.001	0.1	mg/kg	-	-	0.0011	U
	cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140			0.001	0.001	0.1	mg/kg	-	-	0.00055	U
	1,3-Dichloropropene, Total	542-75-6		0.01	0.4	140			0.001		0.1	mg/kg	-	-	0.00055	U
	1,1-Dichloropropene	563-58-6							0.01	0.001	0.1	mg/kg	-	-	0.00055	U
	Bromoform	75-25-2		0.1	1	800			0.1	0.01	1	mg/kg	-	-	0.0044	U
	1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19			0.0005	0.0005	0.02	mg/kg	-	-	0.00055	U
	Benzene	71-43-2		2	200	540			0.2	0.2	20	mg/kg	-	-	0.00055	U
	Toluene	108-88-3		30	1000	520			3	3	225	mg/kg	-	-	0.0011	U
	Ethylbenzene	100-41-4		40	1000	230			4	4	300	mg/kg	-	-	0.0011	U
	Chloromethane	74-87-3		100	1000				10	10	500	mg/kg	-	-	0.0044	U
	Bromomethane	74-83-9		0.5	0.5	32			0.1	0.05	0.5	mg/kg	-	-	0.0022	U
	Vinyl chloride	75-01-4		0.7	0.7	12			0.1	0.07	0.7	mg/kg	-	-	0.0011	U
	Chloroethane	75-00-3		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	1,1-Dichloroethene	75-35-4		3	40	1600			0.3	0.3	30	mg/kg	-	-	0.0011	U
	trans-1,2-Dichloroethene	156-60-5		1	1	2500			0.1	0.1	1	mg/kg	-	-	0.0016	U

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											LOCATION	GLC-WASHSTLANDSCAPE-COMP		GLC-WASHSTLANDSCAPE-VOC(3)	
											SAMPLING DATE	11/3/2022		11/3/2022	
											LAB SAMPLE ID	L2261771-01		L2261771-02	
											SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.03	0.3	mg/kg	-	-	0.00055	U
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	0.9	90	mg/kg	-	-	0.0022	U
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	0.3	30	mg/kg	-	-	0.0022	U
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.07	1	mg/kg	-	-	0.0022	U
	Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	0.01	1.9	mg/kg	-	-	0.0022	U
	p/m-Xylene	179601-23-1		100	100	270			10	10	100	mg/kg	-	-	0.0022	U
	o-Xylene	95-47-6		100	100	270			10	10	100	mg/kg	-	-	0.0011	U
	Xylenes, Total	1330-20-7		100	100	270			10	10	100	mg/kg	-	-	0.0011	U
	cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.01	0.1	mg/kg	-	-	0.0011	U
	1,2-Dichloroethene, Total	540-59-0		0.3					0.1		0.4	mg/kg	-	-	0.0011	U
	Dibromomethane	74-95-3		500	5000				50	50	2500	mg/kg	-	-	0.0022	U
	1,2,3-Trichloropropane	96-18-4		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	Styrene	100-42-5		3	4	630			0.3	0.3	4	mg/kg	-	-	0.0011	U
	Dichlorodifluoromethane	75-71-8		1000	10000				100	100	2500	mg/kg	-	-	0.011	U
	Acetone	67-64-1		6	50	350			0.6	0.6	50	mg/kg	-	-	0.028	U
	Carbon disulfide	75-15-0		100	1000				10	10	500	mg/kg	-	-	0.011	U
	Methyl ethyl ketone	78-93-3		4	50	350			0.4	0.4	40	mg/kg	-	-	0.011	U
	Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	0.04	4	mg/kg	-	-	0.011	U
	2-Hexanone	591-78-6		100	1000				10	10	500	mg/kg	-	-	0.011	U
	Bromochloromethane	74-97-5							0.01			mg/kg	-	-	0.0022	U
	Tetrahydrofuran	109-99-9		500	5000				50	50	2500	mg/kg	-	-	0.0044	U
	2,2-Dichloropropane	594-20-7							0.01	0.01	0.1	mg/kg	-	-	0.0022	U
	1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.01	0.1	mg/kg	-	-	0.0011	U
	1,3-Dichloropropane	142-28-9		500	5000				50	50	2500	mg/kg	-	-	0.0022	U
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.01	0.1	mg/kg	-	-	0.00055	U
	Bromobenzene	108-86-1		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	n-Butylbenzene	104-51-8							0.01		500	mg/kg	-	-	0.0011	U
	sec-Butylbenzene	135-98-8							0.01		500	mg/kg	-	-	0.0011	U
	tert-Butylbenzene	98-06-6		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	o-Chlorotoluene	95-49-8		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	p-Chlorotoluene	106-43-4							0.01	1	500	mg/kg	-	-	0.0022	U
	1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	1	75	mg/kg	-	-	0.0033	U
	Hexachlorobutadiene	87-68-3		30	100	54			3	3	100	mg/kg	-	-	0.0044	U
	Isopropylbenzene	98-82-8		1000	10000				100	100	2500	mg/kg	-	-	0.0011	U
	p-Isopropyltoluene	99-87-6		100	1000				10	10	500	mg/kg	-	-	0.0011	U
	Naphthalene	91-20-3	0.5	4	20	3000			4	0.4	20	mg/kg	-	-	0.0044	U
	n-Propylbenzene	103-65-1		100	1000				10	10	500	mg/kg	-	-	0.0011	U
	1,2,3-Trichlorobenzene	87-61-6							0.01			mg/kg	-	-	0.0022	U
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.2	6	mg/kg	-	-	0.0022	U
	1,3,5-Trimethylbenzene	108-67-8		10	100				1	1	75	mg/kg	-	-	0.0022	U
	1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	100	2500	mg/kg	-	-	0.0022	U
	Diethyl ether	60-29-7		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	Diisopropyl Ether	108-20-3		100	1000				10	10	500	mg/kg	-	-	0.0022	U
	Ethyl-Tert-Butyl-Ether	637-92-3							0.01			mg/kg	-	-	0.0022	U
	Tertiary-Amyl Methyl Ether	994-05-8							0.01			mg/kg	-	-	0.0022	U
	1,4-Dioxane	123-91-1		0.2	6	450			0.1	0.02	2	mg/kg	-	-	0.088	U
	Total VOCs						10	4				mg/kg	-	-	0.0045	
Petroleum Hydrocarbon Quantitation																
	TPH (C10-C36)	NONE		1000	3000	500	5000	2500	500	1000	2500	mg/kg	92.8		-	-

Gray shading indicates nondetect detection limit is above one or more of the listed criteria, except for MA Background Level Natural soil.

RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.
BUD-S3/G3: MassDEP Proposed S3, GW-3 Beneficial Use Determination (BUD) Values Criteria per Draft Interim Guidance Document effective March 18, 2004.
MA-BLNS: Background Level Natural soil current as of 10/24/07
MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
TRC-SSSR-GLX: Site Specific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Project Criteria per client-provided Table X February 21, 2018.
MA-Dudley <RCS-2 Acceptance Criteria, Revised January 15, 2020.
Saugus: Acceptance Criteria for Aggregate Industries - Saugus Quarry, Table 1.

U - Not detected at the reported detection limit for the sample.

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
April 1, 2023 - September 30, 2023

												LOCATION	GLX-DC-WASH ST DRAINAGE - VOC-6		GLX-DC-WASH ST DRAINAGE - COMP	
												SAMPLING DATE	9/8/2023		9/8/2023	
												LAB SAMPLE ID	L2352256-02		L2353243-01	
												SAMPLE TYPE	SOIL		SOIL	
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
General Chemistry																
	Specific Conductance @ 25 C	NONE					8000	4000	2000	2000		umhos/cm	-	-	350	
	Solids, Total	NONE		1000	10000				100	1000		%	96.7		95.9	
	pH (H)	12408-02-5		500	5000				5-9	5-9	2-12.5	SU	-	-	7.54	
	Cyanide, Reactive	57-12-5							250	250	250	mg/kg	-	-	10	U
	Sulfide, Reactive	NONE							500	500	500	mg/kg	-	-	10	U
Ignitability of Solids																
	Ignitability	NONE							>140°	Not Ignitable (NI)	NI		-	-	NI	
MCP Chlorinated Herbicides																
	MCPP	93-65-2							3.4			mg/kg	-	-	3.4	U
	MCPA	94-74-6		100	1000				10	100		mg/kg	-	-	3.4	U
	Dalapon	75-99-0		1000	10000				100	1000		mg/kg	-	-	0.034	U
	Dicamba	1918-00-9		500	5000				50	500		mg/kg	-	-	0.034	U
	Dichloroprop	120-36-5							0.08			mg/kg	-	-	0.034	U
	2,4-D	94-75-7		100	1000				10	100		mg/kg	-	-	0.034	U
	2,4-DB	94-82-6		100	1000				10	100		mg/kg	-	-	0.034	U
	2,4,5-T	93-76-5		100	1000				10	100		mg/kg	-	-	0.034	U
	2,4,5-TP (Silvex)	93-72-1		100	1000				10	100		mg/kg	-	-	0.034	U
MCP Organochlorine Pesticides																
	Delta-BHC	319-86-8		10	100				1	10		mg/kg	-	-	0.00162	U
	Lindane	58-89-9		0.003	0.5	0.46			0.0003	0.05		mg/kg	-	-	0.00054	U
	Alpha-BHC	319-84-6		50	500				5	50		mg/kg	-	-	0.000675	U
	Beta-BHC	319-85-7		10	100				1	10		mg/kg	-	-	0.00162	U
	Heptachlor	76-44-8		0.3	2	4.2			0.05	0.2		mg/kg	-	-	0.00081	U
	Aldrin	309-00-2		0.08	0.5	0.7			0.05	0.05		mg/kg	-	-	0.00162	U
	Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.05	0.09		mg/kg	-	-	0.00304	U
	Endrin	72-20-8		10	20	7			1	2		mg/kg	-	-	0.000675	U
	Endrin ketone	53494-70-5							0.008			mg/kg	-	-	0.00162	U
	Dieldrin	60-57-1		0.08	0.5	1			0.05	0.05		mg/kg	-	-	0.00101	U
	4,4'-DDE	72-55-9		6	30	14			0.6	3		mg/kg	-	-	0.00162	U
	4,4'-DDD	72-54-8		8	40	14			0.8	4		mg/kg	-	-	0.00162	U
	4,4'-DDT	50-29-3		6	30	14			0.6	3		mg/kg	-	-	0.00304	U
	Endosulfan I	959-98-8		0.5	1	1.2			0.05	0.1		mg/kg	-	-	0.00162	U
	Endosulfan II	33213-65-9		0.5	1	1.2			0.05	0.1		mg/kg	-	-	0.00162	U
	Endosulfan sulfate	1031-07-8							0.008			mg/kg	-	-	0.000675	U
	Methoxychlor	72-43-5		200	400	140			20	40		mg/kg	-	-	0.00304	U
	Chlordane	57-74-9		0.7	30	27			0.07	3		mg/kg	-	-	0.0135	U
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.08	0.8	mg/kg	-	-	0.00162	U
MCP Polychlorinated Biphenyls																
	Aroclor 1016	12674-11-2		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1221	11104-28-2		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1232	11141-16-5		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1242	53469-21-9		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1248	12672-29-6		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1254	11097-69-1		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1260	11096-82-5		1	4	1.6					4	mg/kg	-	-	0.0503	U
	Aroclor 1262	37324-23-5		1	4	1.6						mg/kg	-	-	0.0503	U
	Aroclor 1268	11100-14-4		1	4	1.6						mg/kg	-	-	0.0503	U
	PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	0.1	4	mg/kg	-	-	0.0503	U
MCP Semivolatile Organics																
	Acenaphthene	83-32-9	0.5	4	3000	5000			4	5	69	mg/kg	-	-	0.18	
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.6	6	mg/kg	-	-	0.17	U
	Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.08	0.8	mg/kg	-	-	0.072	U
	Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.07	0.7	mg/kg	-	-	0.072	U
	2-Chloronaphthalene	91-58-7		1000	10000				100	100	2500	mg/kg	-	-	0.17	U
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	10	90	mg/kg	-	-	0.17	U
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	20	30	mg/kg	-	-	0.17	U
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.1	1	mg/kg	-	-	0.072	U
	3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	2	20	mg/kg	-	-	0.17	U
	2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	1	7	mg/kg	-	-	0.072	U
	2,6-Dinitrotoluene	606-20-2		100	1000				10	100	500	mg/kg	-	-	0.17	U
	Azobenzene	103-33-3							0.67	50	375	mg/kg	-	-	0.17	U
	Fluoranthene	206-44-0	4	1000	3000	5000			1000	40	2500	mg/kg	-	-	11	
	4-Bromophenyl phenyl ether	101-55-3		100	1000				10	100	500	mg/kg	-	-	0.17	U
	Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.07	0.7	mg/kg	-	-	0.072	U
	Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	100	2500	mg/kg	-	-	0.18	U
	Hexachlorobutadiene	87-68-3		30	100	54			3	10	100	mg/kg	-	-	0.17	U
	Hexachloroethane	67-72-1		0.7	3	74			0.1	0.3	3	mg/kg	-	-	0.072	U
	Isophorone	78-59-1		100	1000				10	100	500	mg/kg	-	-	0.15	U
	Naphthalene	91-20-3	0.5	4	20	3000			4	5	20	mg/kg	-	-	0.17	U
	Nitrobenzene	98-95-3		500	5000				50	100	2500	mg/kg	-	-	0.15	U
	Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	60	600	mg/kg	-	-	2.2	
	Butyl benzyl phthalate	85-68-7		100	1000				10	100	500	mg/kg	-	-	0.17	U
	Di-n-butylphthalate	84-74-2		50	500				5	50	375	mg/kg	-	-	0.17	U
	Di-n-octylphthalate	117-84-0		1000	10000				100	100	2500	mg/kg	-	-	0.17	U
	Diethyl phthalate	84-66-2		10	200	290			1	20	75	mg/kg	-	-	0.17	U
	Dimethyl phthalate	131-11-3		0.7	50	550			0.1	5	7	mg/kg	-	-	0.072	U
	Benzo(a)anthracene	56-55-3	2	7	40	160			7	20	40	mg/kg	-	-	4.7	
	Benzo(a)pyrene	50-32-8	2	2	7	16			2	7	7	mg/kg	-	-	6.3	
	Benzo(b)fluoranthene	205-99-2	2	7	40	160			7	20	40	mg/kg	-	-	6.9	
	Benzo(k)fluoranthene	207-08-9	1	70	400	1600			70	10	400	mg/kg	-	-	2.7	
	Chrysene	218-01-9	2	70	400	3400			70	20	400	mg/kg	-	-	6.6	
	Acenaphthylene	208-96-8	0.5	1	10	14			1	5	10	mg/kg	-	-	0.18	
	Anthracene	120-12-7	1	1000	3000	5000			1000	10	2500	mg/kg	-	-	0.93	
	Benzo(ghi)perylene	191-24-2	1	1000	3000	5000			1000	10	2500	mg/kg	-	-	4.6	
	Fluorene	86-73-7	1	1000	3000	5000			1000	10	2500	mg/kg	-	-	0.26	
	Phenanthrene	85-01-8	3	10	1000	3000			10	30	532.5	mg/kg	-	-	5.2	
	Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16			0.7	4	4	mg/kg	-	-	1.4	
	Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160			7	10	40	mg/kg	-	-	4.2	
	Pyrene	129-00-0	4	1000	3000	5000			1000	40	2500	mg/kg	-	-	9.2	
	Aniline	62-53-3		1000	10000				100	100	2500	mg/kg	-	-	0.2	U
	4-Chloroaniline	106-47-8		1	3	3.3			0.1	0.3	3	mg/kg	-	-	0.17	U
	Dibenzofuran	132-64-9		100	1000				100	100	500	mg/kg	-	-	0.17	U
	2-Methylnaphthalene	91-57-6	0.5	0.7	80	240			0.7	5	25	mg/kg	-	-	0.089	
	Acetophenone	98-86-2		1000	10000				100	100	2500	mg/kg	-	-	0.17	U
	2,4,6-Trichlorophenol	88-06-2		0.7	20	19			0.1	2	7	mg/kg	-	-	0.072	U
	2-Chlorophenol	95-57-8		0.7	100	310			0.1	100	7	mg/kg	-	-	0.072	U
	2,4-Dichlorophenol	120-83-2		0.7	40	40			0.1	4	7	mg/kg	-	-	0.072	U
	2,4-Dimethylphenol	105-67-9		0.7	100	1300			0.1	10	7	mg/kg	-	-	0.072	U
	2-Nitrophenol	88-75-5		100	1000				10	100	500	mg/kg	-	-	0.37	U
	4-Nitrophenol	100-02-7		100	1000				10	100	500	mg/kg	-	-	0.24	U
	2,4-Dinitrophenol	51-28-5		3	50	45			0.3	5	30	mg/kg	-	-	0.82	U
	Pentachlorophenol	87-86-5		3	10	13			0.3	1	10	mg/kg	-	-	0.34	U
	Phenol	108-95-2		1	20	16			0.1	2	10	mg/kg	-	-	0.17	U
	2-Methylphenol	95-48-7		500	5000				50	100	2500	mg/kg	-	-	0.17	U
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000				50	100	2500	mg/kg	-	-	0.25	U
	2,4,5-Trichlorophenol	95-95-4		4	600	580			0.4	60	40	mg/kg	-	-	0.17	U
	Pyridine	110-86-1		500	5000				50	100		mg/kg	-	-	0.18	U
	Biphenyl	92-52-4		0.05	6				0.005	0.6		mg/kg	-	-	0.034	U
	Total SVOCs						100	100				mg/kg	-	-	66.639	
MCP Total Metals																
	Antimony, Total	7440-36-0	1	20	30	16			20	10	30	mg/kg	-	-	2.18	
	Arsenic, Total	7440-38-2	20	20	20	11	40	40	20	20	20	mg/kg	-	-	10.3	
	Barium, Total	7440-39-3	50	1000	3000	2100			1000	375	2500	mg/kg	-	-	45.7	
	Beryllium, Total	7440-41-7	0.4	90	200	10			90	4	200	mg/kg	-	-	0.393	
	Cadmium, Total	7440-43-9	2	70	100	16	80	30	70	20	100	mg/kg	-	-	0.393	U
	Chromium, Total	7440-47-3	30	100	200	570	1000	1000	100	200	200	mg/kg	-	-	35	
	Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	500	600	mg/kg	-	-	82.1	
	Mercury, Total	7439-97-6	0.3	20	30	16	10	10	20	3	30	mg/kg	-	-	0.101	
	Nickel, Total	7440-02-0	20	600	1000	350			600	150	1000	mg/kg	-	-	17	
	Selenium, Total	7782-49-2	0.5	400	700	390			400	5	700	mg/kg	-	-	1.96	U
	Silver, Total	7440-22-4	0.6	100	200	110			100	6	200	mg/kg	-	-	0.393	U
	Thallium, Total	7440-28-0	0.6	8	60	37			8	6	60	mg/kg	-	-	1.96	U
	Vanadium, Total	7440-62-2	30	400	700	530			400	225	700	mg/kg	-	-	31.7	
	Zinc, Total	7440-66-6	100	1000	3000	5000			1000	500	2500	mg/kg	-	-	240	
MCP Volatile Organics by EPA 5035																
	Methylene chloride	75-09-2		0.1	4	900			0.1	0.01	1	mg/kg	0.0037	U	-	-
	1,1-Dichloroethane	75-34-3		0.4	9	1300			0.1	0.04	4	mg/kg	0.00074	U	-	-
	Chloroform	67-66-3		0.2	0.2	410			0.1	0.02	0.2	mg/kg	0.0011	U	-	-
	Carbon tetrachloride	56-23-5		5	5	220			0.5	0.5	5	mg/kg	0.00074	U	-	-
	1,2-Dichloropropane	78-87-5		0.1	0.1	280			0.1	0.01	0.1	mg/kg	0.00074	U	-	-
	Dibromochloromethane	124-48-1		0.005	0.03	340			0.0005	0.0005	0.03	mg/kg	0.00074	U	-	-
	1,1,2-Trichloroethane	79-00-5		0.1	2	91			0.1	0.01	1	mg/kg	0.00074	U	-	-
	Tetrachloroethene	127-18-4		1	10	370			0.1	0.1	10	mg/kg	0.0004		-	-
	Chlorobenzene	108-90-7		1	3	110			0.1	0.1	3	mg/kg	0.00037	U	-	-
	Trichlorofluoromethane	75-69-4		1000	10000				100	100	2500	mg/kg	0.003	U	-	-
	1,2-Dichloroethane	107-06-2		0.1	0.1	310			0.1	0.01	0.1	mg/kg	0.00074	U	-	-
	1,1,1-Trichloroethane	71-55-6		30	600	1400			3	3	225	mg/kg	0.00037	U	-	-
	Bromodichloromethane	75-27-4		0.1	0.1	460			0.1	0.01	0.1	mg/kg	0.00037	U	-	-
	trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140			0.001	0.001	0.1	mg/kg	0.00074	U	-	-
	cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140			0.001	0.001	0.1	mg/kg	0.00037	U	-	-
	1,3-Dichloropropene, Total	542-75-6		0.01	0.4	140			0.001		0.1	mg/kg	0.00037	U	-	-
	1,1-Dichloropropene	563-58-6							0.01	0.001	0.1	mg/kg	0.00037	U	-	-
	Bromoform	75-25-2		0.1	1	800			0.1	0.01	1	mg/kg	0.003	U	-	-
	1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19			0.0005	0.0005	0.02	mg/kg	0.00037	U	-	-
	Benzene	71-43-2		2	200	540			0.2	0.2	20	mg/kg	0.00037	U	-	-
	Toluene	108-88-3		30	1000	520			3	3	225	mg/kg	0.00074	U	-	-
	Ethylbenzene	100-41-4		40	1000	230			4	4	300	mg/kg	0.00074	U	-	-
	Chloromethane	74-87-3		100	1000				10	10	500	mg/kg	0.003	U	-	-
	Bromomethane	74-83-9		0.5	0.5	32			0.1	0.05	0.5	mg/kg	0.0015	U	-	-
	Vinyl chloride	75-01-4		0.7	0.7	12			0.1	0.07	0.7	mg/kg	0.00074	U	-	-
	Chloroethane	75-00-3		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	1,1-Dichloroethene	75-35-4		3	40	1600			0.3	0.3	30	mg/kg	0.00074	U	-	-
	trans-1,2-Dichloroethene	156-60-5		1	1	2500			0.1	0.1	1	mg/kg	0.0011	U	-	-
	Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.03	0.3	mg/kg	0.00037	U	-	-
	1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	0.9	90	mg/kg	0.0015	U	-	-
	1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	0.3	30	mg/kg	0.0015	U	-	-
	1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.07	1	mg/kg	0.0015	U	-	-
	Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	0.01	1.9	mg/kg	0.0015	U	-	-
	p/m-Xylene	179601-23-1		100	100	270			10	10	100	mg/kg	0.0015	U	-	-
	o-Xylene	95-47-6		100	100	270			10	10	100	mg/kg	0.00074	U	-	-
	Xylenes, Total	1330-20-7		100	100	270			10	10	100	mg/kg	0.00074	U	-	-
	cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.01	0.1	mg/kg	0.00074	U	-	-
	1,2-Dichloroethene, Total	540-59-0		0.3					0.1		0.4	mg/kg	0.00074	U	-	-
	Dibromomethane	74-95-3		500	5000				50	50	2500	mg/kg	0.0015	U	-	-
	1,2,3-Trichloropropane	96-18-4		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	Styrene	100-42-5		3	4	630			0.3	0.3	4	mg/kg	0.00074	U	-	-
	Dichlorodifluoromethane	75-71-8		1000	10000				100	100	2500	mg/kg	0.0074	U	-	-
	Acetone	67-64-1		6	50	350			0.6	0.6	50	mg/kg	0.018	U	-	-
	Carbon disulfide	75-15-0		100	1000				10	10	500	mg/kg	0.0074	U	-	-
	Methyl ethyl ketone	78-93-3		4	50	350			0.4	0.4	40	mg/kg	0.0074	U	-	-
	Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	0.04	4	mg/kg	0.0074	U	-	-
	2-Hexanone	591-78-6		100	1000				10	10	500	mg/kg	0.0074	U	-	-
	Bromochloromethane	74-97-5							0.01			mg/kg	0.0015	U	-	-
	Tetrahydrofuran	109-99-9		500	5000				50	50	2500	mg/kg	0.003	U	-	-
	2,2-Dichloropropane	594-20-7							0.01	0.01	0.1	mg/kg	0.0015	U	-	-
	1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.01	0.1	mg/kg	0.00074	U	-	-
	1,3-Dichloropropane	142-28-9		500	5000				50	50	2500	mg/kg	0.0015	U	-	-
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.01	0.1	mg/kg	0.00037	U	-	-
	Bromobenzene	108-86-1		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	n-Butylbenzene	104-51-8							0.01		500	mg/kg	0.00074	U	-	-
	sec-Butylbenzene	135-98-8							0.01		500	mg/kg	0.00074	U	-	-
	tert-Butylbenzene	98-06-6		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	o-Chlorotoluene	95-49-8		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	p-Chlorotoluene	106-43-4							0.01	1	500	mg/kg	0.0015	U	-	-
	1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	1	75	mg/kg	0.0022	U	-	-
	Hexachlorobutadiene	87-68-3		30	100	54			3	3	100	mg/kg	0.003	U	-	-
	Isopropylbenzene	98-82-8		1000	10000				100	100	2500	mg/kg	0.00074	U	-	-
	p-Isopropyltoluene	99-87-6		100	1000				10	10	500	mg/kg	0.00074	U	-	-
	Naphthalene	91-20-3	0.5	4	20	3000			4	0.4	20	mg/kg	0.003	U	-	-
	n-Propylbenzene	103-65-1		100	1000				10	10	500	mg/kg	0.00074	U	-	-
	1,2,3-Trichlorobenzene	87-61-6							0.01			mg/kg	0.0015	U	-	-
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.2	6	mg/kg	0.0015	U	-	-
	1,3,5-Trimethylbenzene	108-67-8		10	100				1	1	75	mg/kg	0.0015	U	-	-
	1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	100	2500	mg/kg	0.0015	U	-	-
	Diethyl ether	60-29-7		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	Diisopropyl Ether	108-20-3		100	1000				10	10	500	mg/kg	0.0015	U	-	-
	Ethyl-Tert-Butyl-Ether	637-92-3							0.01			mg/kg	0.0015	U	-	-
	Tertiary-Amyl Methyl Ether	994-05-8							0.01			mg/kg	0.0015	U	-	-
	1,4-Dioxane	123-91-1		0.2	6	450			0.1	0.02	2	mg/kg	0.059	U	-	-
	Total VOCs						10	4				mg/kg	0.0004		-	-
Petroleum Hydrocarbon Quantitation																
	TPH (C10-C36)	NONE		1000	3000	500	5000	2500	500	1000	2500	mg/kg	-	-	1160	

Yellow shading indicates detected result is equal to or above one or more of the listed criteria, except for MA Background Level Natural soil.
Grav shadina indicates nondetect detection limit is above one or more of the listed criteria, except for MA Backcround Level Natural soil.

RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.
BUD-S3/G3: MassDEP Proposed S3. GW-3 Beneficial Use Determination /BUD\ Values Criteria oer Draft Interim Guidance Document effective March 18, 2004.
MA-BLNS: Background Level Natural soil current as of 10/24/07
MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
TRC-SSSR-GLX: Site Soecific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Proiect Criteria oer client-provided Table X Februarv 21. 2018.
MA-Dudley <RCS-2 Acceptance Criteria, Revised January 15, 2020.
Saugus: Acceptance Criteria for Aqqregate Industries - Saugus Quarry, Table 1.

U - Not detected at the reported detection limit for the sample.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 -
www.alphalab.com

Appendix D

Laboratory Testing Reports

ANALYTICAL REPORT

Lab Number:	L2338866
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	07/21/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (99110) , NJ (MA015), NY (11627), NC (685), OH (CL106), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2338866
Report Date: 07/21/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2338866-01	045163-103WASH-F1	AIR	SOMERVILLE, MA	07/06/23 10:30	07/07/23
L2338866-02	045163-103WASH-B1	AIR	SOMERVILLE, MA	07/06/23 10:25	07/07/23
L2338866-03	045163-103WASH-SV1	SOIL_VAPOR	SOMERVILLE, MA	07/06/23 12:13	07/07/23
L2338866-04	045163-103WASH-SV2	SOIL_VAPOR	SOMERVILLE, MA	07/06/23 12:15	07/07/23
L2338866-05	UNUSED CAN #2667	AIR	SOMERVILLE, MA		07/07/23

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	NO
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	TUFTS STREET	**Lab Number:**	L2338866
Project Number:	045163	**Report Date:**	07/21/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

Case Narrative (continued)

MCP Related Narratives

Canisters were released from the laboratory on July 3, 2023. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to questions E b/I:

All samples were analyzed for a subset of the MCP compounds per the Chain of Custody.

Sample Receipt

sample : The sample had an RPD for the pre- and post-flow controller calibration check (% RPD) that was outside of the control limit (20% RPD). The final pressure recorded by the laboratory of the associated canister was - inches of mercury. No further action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 07/21/23

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2338866
Report Date: 07/21/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

AIR

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

SAMPLE RESULTS

Lab ID: L2338866-01
Client ID: 045163-103WASH-F1
Sample Location: SOMERVILLE, MA

Date Collected: 07/06/23 10:30
Date Received: 07/07/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 07/19/23 18:37
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.215	0.020	--	0.852	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	0.027	0.020	--	0.107	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.038	0.020	--	0.204	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.102	0.020	--	0.692	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	98		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	101		60-140

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

SAMPLE RESULTS

Lab ID: L2338866-02
Client ID: 045163-103WASH-B1
Sample Location: SOMERVILLE, MA

Date Collected: 07/06/23 10:25
Date Received: 07/07/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 07/19/23 19:17
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	1.64	0.020	--	6.50	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	0.151	0.020	--	0.599	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.171	0.020	--	0.919	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.336	0.020	--	2.28	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	102		60-140
bromochloromethane	105		60-140
chlorobenzene-d5	103		60-140

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

SAMPLE RESULTS

Lab ID: L2338866-03
Client ID: 045163-103WASH-SV1
Sample Location: SOMERVILLE, MA

Date Collected: 07/06/23 12:13
Date Received: 07/07/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 101,TO-15-SIM
Analytical Date: 07/19/23 21:15
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.603	0.020	--	2.39	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	0.585	0.020	--	2.32	0.079	--		1
1,1,1-Trichloroethane	0.021	0.020	--	0.115	0.109	--		1
Trichloroethene	2.92	0.020	--	15.7	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	7.60	0.020	--	51.5	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	101		60-140
bromochloromethane	105		60-140
chlorobenzene-d5	100		60-140

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

SAMPLE RESULTS

Lab ID: L2338866-04
Client ID: 045163-103WASH-SV2
Sample Location: SOMERVILLE, MA

Date Collected: 07/06/23 12:15
Date Received: 07/07/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 101,TO-15-SIM
Analytical Date: 07/20/23 21:22
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	0.027	0.020	--	0.107	0.079	--		1
trans-1,2-Dichloroethene	1.87	0.020	--	7.41	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	4.83	0.020	--	19.2	0.079	--		1
1,1,1-Trichloroethane	0.051	0.020	--	0.278	0.109	--		1
Trichloroethene	24.1	0.020	--	130	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	27.7	0.020	--	188	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	102		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	101		60-140

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 07/19/23 17:57

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1805199-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2338866
Report Date: 07/21/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 07/20/23 14:55

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 04 Batch: WG1805710-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2338866

Report Date: 07/21/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1805199-3								
Vinyl chloride	92		-		70-130	-		
1,1-Dichloroethene	101		-		70-130	-		
trans-1,2-Dichloroethene	93		-		70-130	-		
1,1-Dichloroethane	100		-		70-130	-		
cis-1,2-Dichloroethene	102		-		70-130	-		
1,1,1-Trichloroethane	89		-		70-130	-		
Trichloroethene	92		-		70-130	-		
1,1,2-Trichloroethane	94		-		70-130	-		
Tetrachloroethene	92		-		70-130	-		
1,1,2,2-Tetrachloroethane	102		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2338866

Report Date: 07/21/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 04 Batch: WG1805710-3								
Vinyl chloride	82		-		70-130	-		
1,1-Dichloroethene	90		-		70-130	-		
trans-1,2-Dichloroethene	77		-		70-130	-		
1,1-Dichloroethane	72		-		70-130	-		
cis-1,2-Dichloroethene	75		-		70-130	-		
1,1,1-Trichloroethane	94		-		70-130	-		
Trichloroethene	85		-		70-130	-		
1,1,2-Trichloroethane	84		-		70-130	-		
Tetrachloroethene	73		-		70-130	-		
1,1,2,2-Tetrachloroethane	83		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2338866
Report Date: 07/21/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1805199-5 QC Sample: L2338866-03 Client ID: 045163-103WASH-SV1						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	0.603	0.592	ppbV	2		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	0.585	0.583	ppbV	0		25
1,1,1-Trichloroethane	0.021	ND	ppbV	NC		25
Trichloroethene	2.92	2.86	ppbV	2		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Tetrachloroethene	7.60	7.51	ppbV	1		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25

Project Name: TUFTS STREET

Lab Number: L2338866

Project Number: 045163

Report Date: 07/21/23

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2338866-01	045163-103WASH-F1	0234	Flow 5	07/03/23	429180		-	-	-	Pass	3.0	2.7	11
L2338866-01	045163-103WASH-F1	3943	6.0L Can	07/03/23	429180	L2334816-10	Pass	-29.6	-8.9	-	-	-	-
L2338866-02	045163-103WASH-B1	0416	Flow 5	07/03/23	429180		-	-	-	Pass	3.0	2.4	22
L2338866-02	045163-103WASH-B1	3482	6.0L Can	07/03/23	429180	L2335017-08	Pass	-29.6	-9.3	-	-	-	-
L2338866-03	045163-103WASH-SV1	01764	Flow 2	07/03/23	429180		-	-	-	Pass	36.3	40.1	10
L2338866-03	045163-103WASH-SV1	3443	2.7L Can	07/03/23	429180	L2335714-01	Pass	-29.6	0.0	-	-	-	-
L2338866-04	045163-103WASH-SV2	02174	Flow 2	07/03/23	429180		-	-	-	Pass	36.4	37.8	4
L2338866-04	045163-103WASH-SV2	2186	2.7L Can	07/03/23	429180	L2335714-01	Pass	-29.5	-2.1	-	-	-	-
L2338866-05	UNUSED CAN #2667	0413	Flow 5	07/03/23	429180		-	-	-	Pass	3.0	2.5	18
L2338866-05	UNUSED CAN #2667	2667	6.0L Can	07/03/23	429180	L2334816-09	Pass	-29.6	-29.9	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/20/23 04:44
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	89		60-140
chlorobenzene-d5	106		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/20/23 04:44
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2334816

Project Number: CANISTER QC BAT **Report Date:** 07/21/23

Air Canister Certification Results

Lab ID: L2334816-09
Client ID: CAN 3961 SHELF 62
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	108		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/20/23 05:23
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2334816

Project Number: CANISTER QC BAT **Report Date:** 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	90		60-140
chlorobenzene-d5	106		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/20/23 05:23
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2334816

Project Number: CANISTER QC BAT **Report Date:** 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2334816
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2334816-10
Client ID: CAN 2318 SHELF 63
Sample Location:

Date Collected: 06/19/23 09:00
Date Received: 06/19/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	89		60-140
chlorobenzene-d5	108		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/20/23 22:33
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	85		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	87		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/20/23 22:33
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335017
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335017-08
Client ID: CAN 1542 SHELF 68
Sample Location:

Date Collected: 06/20/23 14:00
Date Received: 06/20/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	85		60-140
bromochloromethane	87		60-140
chlorobenzene-d5	86		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 06/22/23 19:58
Analyst: APR

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 06/22/23 19:58
Analyst: APR

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2335714
Report Date: 07/21/23

Air Canister Certification Results

Lab ID: L2335714-01
Client ID: CAN 407 SHELF 0
Sample Location:

Date Collected: 06/21/23 18:00
Date Received: 06/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	86		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	89		60-140

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2338866
Report Date: 07/21/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2338866-01A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2338866-02A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2338866-03A	Canister - 2.7 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2338866-04A	Canister - 2.7 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2338866-05A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	TUFTS STREET	**Lab Number:**	L2338866
Project Number:	045163	**Report Date:**	07/21/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2338866
Project Number:	045163	**Report Date:**	07/21/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2338866
Project Number:	045163	**Report Date:**	07/21/23

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

REFERENCES

101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/7/23

ALPHA Job #: L2338866

Client Information

Client: GEI Consultants
Address: 400 Unicorn Park Dr
Woburn MA 01801
Phone: 781-721-4000
Fax:
Email: labdata@geiconsultants.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Tufts Street
Project Location: Somerville, MA
Project #: 045163
Project Manager: Chris Coner
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☒

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	ANALYSIS TO-15	TO-15 SIM	APH (Subset Non-petroleum HCs)	Fixed Gases	Sulfides & Mercaptans by TO-15	☐	Sample Comments (i.e. PID)
38866-01	045163-103wash-FI	7/6/23	10:30	10:30	-29.94	-8.69	IA	DJM	6L	3443	0234	X						see attached list of analytes
-02	045163-103wash-BI	7/6/23	10:25	10:25	-30.53	-10.00	IA	DJM	6L	3482	0416	X						
-03	045163-103wash-SV1	7/6/23	11:13	12:13	-29.68	-1.60	SV	DJM	2.7L	3443	01764	X						
-04	045163-103wash-SV2	7/6/23	11:15	12:15	-29.65	-3.92	SV	DJM	2.7L	2186	02174	X						

Relinquished By: Date/Time: Received By: Date/Time:

Dan Mello 7/6/23 13:20 GEI Field Rm 7/6/23 13:20
GEI Field Rm 7/7/23 1248 7/7/23 1248
7/7/23 1248 7/7/23 1248
7/7/23 1812

Ken Lu 7/7/23 1930 Rob Mendoza ASC 7/7/23 1930
Rob Mendoza ASC 7/7/23 2030 ASC 7/7/23 20.30

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-03 Rev (25-Sep-15)

Serial_No:07212315:21

Tufts Street IA/SV Analyte List

- Vinyl chloride
- 1,1-Dichloroethene
- trans-1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- 1,1,1-Trichloroethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane

ANALYTICAL REPORT

Lab Number:	L2354341
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	09/27/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2354341
Report Date: 09/27/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2354341-01	045163-MW108	WATER	SOMERVILLE, MA	09/15/23 11:31	09/18/23

Project Name: TUFTS STREET **Lab Number:** L2354341

Project Number: 045163 **Report Date:** 09/27/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	TUFTS STREET	**Lab Number:**	L2354341
Project Number:	045163	**Report Date:**	09/27/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	TUFTS STREET	**Lab Number:**	L2354341
Project Number:	045163	**Report Date:**	09/27/23

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

L2354341-01: Initial calibration utilized a quadratic fit for: bromoform

In reference to question H:

L2354341-01: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0036)

Average Response Factor: 1,4-dioxane

L2354341-01: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 09/27/23

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2354341
Report Date: 09/27/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260D	Batch QC	WG1832480-3	Bromomethane	LCS	69	70-130	01	potential low bias

ORGANICS

VOLATILES

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2354341
Report Date: 09/27/23

SAMPLE RESULTS

Lab ID: L2354341-01
Client ID: 045163-MW108
Sample Location: SOMERVILLE, MA

Date Collected: 09/15/23 11:31
Date Received: 09/18/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 141,8260D
Analytical Date: 09/26/23 20:29
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: TUFTS STREET **Lab Number:** L2354341

Project Number: 045163 **Report Date:** 09/27/23

SAMPLE RESULTS

Lab ID: L2354341-01 Date Collected: 09/15/23 11:31

Client ID: 045163-MW108 Date Received: 09/18/23

Sample Location: SOMERVILLE, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2354341
Report Date: 09/27/23

SAMPLE RESULTS

Lab ID: L2354341-01
Client ID: 045163-MW108
Sample Location: SOMERVILLE, MA
Date Collected: 09/15/23 11:31
Date Received: 09/18/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	109		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2354341
Report Date: 09/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 09/26/23 12:45
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1832480-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2354341
Report Date: 09/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 09/26/23 12:45
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1832480-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2354341
Report Date: 09/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 09/26/23 12:45
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1832480-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	106		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2354341

Report Date: 09/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1832480-3 WG1832480-4								
Methylene chloride	99		98		70-130	1		20
1,1-Dichloroethane	98		100		70-130	2		20
Chloroform	96		95		70-130	1		20
Carbon tetrachloride	93		95		70-130	2		20
1,2-Dichloropropane	99		92		70-130	7		20
Dibromochloromethane	94		92		70-130	2		20
1,1,2-Trichloroethane	97		98		70-130	1		20
Tetrachloroethene	95		99		70-130	4		20
Chlorobenzene	98		98		70-130	0		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	90		92		70-130	2		20
1,1,1-Trichloroethane	96		98		70-130	2		20
Bromodichloromethane	94		97		70-130	3		20
trans-1,3-Dichloropropene	94		94		70-130	0		20
cis-1,3-Dichloropropene	93		94		70-130	1		20
1,1-Dichloropropene	96		96		70-130	0		20
Bromoform	90		90		70-130	0		20
1,1,2,2-Tetrachloroethane	100		100		70-130	0		20
Benzene	93		94		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	98		100		70-130	2		20
Chloromethane	100		100		70-130	0		20
Bromomethane	**69**	Q	76		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2354341
Report Date: 09/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1832480-3 WG1832480-4								
Vinyl chloride	98		100		70-130	2		20
Chloroethane	98		100		70-130	2		20
1,1-Dichloroethene	94		99		70-130	5		20
trans-1,2-Dichloroethene	96		98		70-130	2		20
Trichloroethene	86		89		70-130	3		20
1,2-Dichlorobenzene	100		99		70-130	1		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	98		97		70-130	1		20
Methyl tert butyl ether	84		82		70-130	2		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	98		98		70-130	0		20
Dibromomethane	93		96		70-130	3		20
1,2,3-Trichloropropane	100		99		70-130	1		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	94		96		70-130	2		20
Acetone	94		88		70-130	7		20
Carbon disulfide	100		100		70-130	0		20
Methyl ethyl ketone	88		88		70-130	0		20
Methyl isobutyl ketone	84		88		70-130	5		20
2-Hexanone	92		89		70-130	3		20
Bromochloromethane	100		100		70-130	0		20
Tetrahydrofuran	90		85		70-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2354341

Report Date: 09/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1832480-3 WG1832480-4								
2,2-Dichloropropane	91		95		70-130	4		20
1,2-Dibromoethane	94		95		70-130	1		20
1,3-Dichloropropane	96		95		70-130	1		20
1,1,1,2-Tetrachloroethane	95		93		70-130	2		20
Bromobenzene	99		97		70-130	2		20
n-Butylbenzene	100		100		70-130	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	93		94		70-130	1		20
Hexachlorobutadiene	95		90		70-130	5		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	93		91		70-130	2		20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	96		93		70-130	3		20
1,2,4-Trichlorobenzene	93		90		70-130	3		20
1,3,5-Trimethylbenzene	100		100		70-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Diethyl ether	90		88		70-130	2		20
Diisopropyl Ether	91		90		70-130	1		20
Ethyl-Tert-Butyl-Ether	82		83		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2354341

Report Date: 09/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1832480-3 WG1832480-4								
Tertiary-Amyl Methyl Ether	82		84		70-130	2		20
1,4-Dioxane	78		82		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		94		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	101		102		70-130
Dibromofluoromethane	98		97		70-130

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2354341
Report Date: 09/27/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2354341-01A	Vial HCl preserved	A	NA		3.5	Y	Absent		MCP-8260-21(14)
L2354341-01B	Vial HCl preserved	A	NA		3.5	Y	Absent		MCP-8260-21(14)
L2354341-01C	Vial HCl preserved	A	NA		3.5	Y	Absent		MCP-8260-21(14)

*Values in parentheses indicate holding time in days

Project Name:	TUFTS STREET	**Lab Number:**	L2354341
Project Number:	045163	**Report Date:**	09/27/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2354341
Project Number:	045163	**Report Date:**	09/27/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2354341
Project Number:	045163	**Report Date:**	09/27/23

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2354341
Project Number:	045163	**Report Date:**	09/27/23

REFERENCES

141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 09/18/23

ALPHA Job #: L2354341

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information
- Project Name: Tufts Street
- Project Location: Somerville, MA
- Project #: 045163
- Project Manager: Chris Coner
- ALPHA Quote #:

Report Information - Data Deliverables
- ☐ ADEx ☒ EMAIL

Billing Information
- ☐ Same as Client info PO #:

Client Information
- Client: GEI Consultants
- Address: 400 Unicorn Park Dr. Woburn MA, 01801
- Phone: 781-721-4000
- Email: labdata@geiconsultants.com

Regulatory Requirements & Project Information Requirements
- ☒ Yes ☐ No MA MCP Analytical Methods
- ☐ Yes ☒ No CT RCP Analytical Methods
- ☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
- ☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
- ☐ Yes ☒ No NPDES RGP
- ☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time
- ☒ Standard ☐ RUSH (only confirmed if pre-approved)
- Date Due:

Additional Project Information:

ANALYSIS
- VOC: ☒ 8260 ☐ 624 ☐ 524.2
- SVOC: ☐ ABN ☐ PAH
- METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
- METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
- EPH: ☐ Ranges & Targets ☐ Ranges Only
- VPH: ☐ Ranges & Targets ☐ Ranges Only
- ☐ PCB ☐ PEST
- TPH: ☐ Quant Only ☐ Fingerprint

SAMPLE INFO
- Filtration: ☐ Field ☐ Lab to do
- Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	Sample Comments	TOTAL # BOTTLES
54341-01	045163-MW108	9/15/23	11:31	GW	NMT	X		

Container Type	
Preservative	HCL

Container Type
P= Plastic, A= Amber glass, V= Vial, G= Glass, B= Bacteria cup, C= Cube, O= Other, E= Encore, D= BOD Bottle

Preservative
A= None, B= HCl, C= HNO_3, D= H_2SO_4, E= NaOH, F= MeOH, G= $NaHSO_4$, H = $Na_2S_2O_3$, I= Ascorbic Acid, J = NH_4Cl, K= Zn Acetate, O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
Nicholas Procopio	9/15/23 12:50	GEI Fridge	9/15/23 12:56
GEI Fridge	9/18/23 1123		9/18/23 1123
	9/18/23 1123	Plus ALA	9/18/23 1123

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Method Blank Summary
Form 4
Volatiles

Client	: GEI Consultants	**Lab Number**	: L2354341
Project Name	: TUFTS STREET	**Project Number**	: 045163
Lab Sample ID	: WG1832480-5	**Lab File ID**	: J230926D08
Instrument ID	: JACK2		
Matrix	: WATER	**Analysis Date**	: 09/26/23 12:45

Client Sample No.	Lab Sample ID	Analysis Date
WG1832480-3LCS	WG1832480-3	09/26/23 10:38
WG1832480-4LCSD	WG1832480-4	09/26/23 11:20
045163-MW108	L2354341-01	09/26/23 20:29

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants	**Lab Number**	: L2354341
Project Name	: TUFTS STREET	**Project Number**	: 045163
Instrument ID	: JACK2	**Calibration Date**	: 09/26/23 10:38
Lab File ID	: J230926D02	**Init. Calib. Date(s)**	: 09/13/23 09/14/23
Sample No	: WG1832480-2	**Init. Calib. Times**	: 08:49 06:31
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	192	0
Dichlorodifluoromethane	0.538	0.505	-	6.1	20	164	0
Chloromethane	0.4	0.41	-	-2.5	20	181	0
Vinyl chloride	0.612	0.597	-	2.5	20	166	0
Bromomethane	10	6.91	-	30.9*	20	156	0
Chloroethane	0.423	0.413	-	2.4	20	168	0
Trichlorofluoromethane	0.68	0.681	-	-0.1	20	181	0
Ethyl ether	0.19	0.17	-	10.5	20	174	0
1,1-Dichloroethene	0.375	0.352	-	6.1	20	165	0
Carbon disulfide	1.064	1.059	-	0.5	20	175	0
Freon-113	0.424	0.415	-	2.1	20	172	0
Acrolein	0.048	0.044	-	8.3	20	188	0
Methylene chloride	0.389	0.386	-	0.8	20	184	0
Acetone	0.102	0.095	-	6.9	20	180	0
trans-1,2-Dichloroethene	0.416	0.401	-	3.6	20	175	0
Methyl acetate	0.235	0.193	-	17.9	20	150	0
Methyl tert-butyl ether	1.05	0.88	-	16.2	20	162	0
tert-Butyl alcohol	0.033	0.023	-	30.3*	20	142	0
Diisopropyl ether	1.081	0.985	-	8.9	20	174	0
1,1-Dichloroethane	0.725	0.712	-	1.8	20	171	0
Halothane	0.331	0.326	-	1.5	20	177	0
Acrylonitrile	0.103	0.092	-	10.7	20	166	0
Ethyl tert-butyl ether	1.069	0.878	-	17.9	20	162	0
Vinyl acetate	0.629	0.554	-	11.9	20	189	0
cis-1,2-Dichloroethene	0.451	0.442	-	2	20	178	0
2,2-Dichloropropane	0.654	0.596	-	8.9	20	167	0
Bromochloromethane	0.208	0.208	-	0	20	181	0
Cyclohexane	0.652	0.643	-	1.4	20	178	0
Chloroform	0.752	0.719	-	4.4	20	178	0
Ethyl acetate	0.3	0.243	-	19	20	154	0
Carbon tetrachloride	0.61	0.567	-	7	20	171	0
Tetrahydrofuran	0.112	0.101	-	9.8	20	160	0
Dibromofluoromethane	0.316	0.309	-	2.2	20	183	0
1,1,1-Trichloroethane	0.668	0.641	-	4	20	172	0
2-Butanone	0.137	0.121	-	11.7	20	175	0
1,1-Dichloropropene	0.545	0.522	-	4.2	20	177	0
Benzene	1.598	1.489	-	6.8	20	178	0
tert-Amyl methyl ether	0.993	0.814	-	18	20	160	0
1,2-Dichloroethane-d4	0.361	0.338	-	6.4	20	181	0
1,2-Dichloroethane	0.539	0.484	-	10.2	20	164	0
Methyl cyclohexane	0.747	0.672	-	10	20	180	0
Trichloroethene	0.472	0.409	-	13.3	20	177	0
Dibromomethane	0.249	0.232	-	6.8	20	175	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants	**Lab Number**	: L2354341
Project Name	: TUFTS STREET	**Project Number**	: 045163
Instrument ID	: JACK2	**Calibration Date**	: 09/26/23 10:38
Lab File ID	: J230926D02	**Init. Calib. Date(s)**	: 09/13/23 09/14/23
Sample No	: WG1832480-2	**Init. Calib. Times**	: 08:49 06:31
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.365	0.36	-	1.4	20	186	0
2-Chloroethyl vinyl ether	0.203	0.171	-	15.8	20	157	0
Bromodichloromethane	0.524	0.494	-	5.7	20	171	0
1,4-Dioxane	0.00363	0.00281*	-	22.6*	20	137	0
cis-1,3-Dichloropropene	0.572	0.531	-	7.2	20	176	0
Chlorobenzene-d5	1	1	-	0	20	180	0
Toluene-d8	1.141	1.211	-	-6.1	20	190	0
Toluene	1.033	1.032	-	0.1	20	174	0
4-Methyl-2-pentanone	0.116	0.098	-	15.5	20	149	0
Tetrachloroethene	0.46	0.438	-	4.8	20	168	0
trans-1,3-Dichloropropene	0.536	0.504	-	6	20	175	0
Ethyl methacrylate	0.417	0.394	-	5.5	20	159	0
1,1,2-Trichloroethane	0.273	0.266	-	2.6	20	179	0
Chlorodibromomethane	0.413	0.387	-	6.3	20	176	0
1,3-Dichloropropane	0.542	0.519	-	4.2	20	175	0
1,2-Dibromoethane	0.345	0.326	-	5.5	20	176	0
2-Hexanone	0.221	0.204	-	7.7	20	154	0
Chlorobenzene	1.187	1.165	-	1.9	20	174	0
Ethylbenzene	2.076	2.025	-	2.5	20	171	0
1,1,1,2-Tetrachloroethane	0.414	0.393	-	5.1	20	174	0
p/m Xylene	0.905	0.858	-	5.2	20	175	0
o Xylene	0.864	0.818	-	5.3	20	176	0
Styrene	1.457	1.367	-	6.2	20	173	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	180	0
Bromoform	10	9.057	-	9.4	20	164	0
Isopropylbenzene	3.579	3.58	-	-0	20	172	0
4-Bromofluorobenzene	0.738	0.746	-	-1.1	20	177	0
Bromobenzene	0.823	0.816	-	0.9	20	174	0
n-Propylbenzene	4.265	4.338	-	-1.7	20	173	0
1,4-Dichlorobutane	0.847	0.856	-	-1.1	20	172	0
1,1,2,2-Tetrachloroethane	0.681	0.721	-	-5.9	20	184	0
4-Ethyltoluene	3.604	3.615	-	-0.3	20	171	0
2-Chlorotoluene	2.802	2.817	-	-0.5	20	170	0
1,3,5-Trimethylbenzene	3.072	3.127	-	-1.8	20	173	0
1,2,3-Trichloropropane	0.558	0.563	-	-0.9	20	174	0
trans-1,4-Dichloro-2-buten	0.206	0.188	-	8.7	20	157	0
4-Chlorotoluene	2.482	2.579	-	-3.9	20	178	0
tert-Butylbenzene	2.65	2.683	-	-1.2	20	173	0
1,2,4-Trimethylbenzene	2.996	3.05	-	-1.8	20	174	0
sec-Butylbenzene	3.982	4.14	-	-4	20	175	0
p-Isopropyltoluene	3.475	3.537	-	-1.8	20	174	0
1,3-Dichlorobenzene	1.723	1.759	-	-2.1	20	179	0
1,4-Dichlorobenzene	1.75	1.724	-	1.5	20	175	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants	**Lab Number**	: L2354341
Project Name	: TUFTS STREET	**Project Number**	: 045163
Instrument ID	: JACK2	**Calibration Date**	: 09/26/23 10:38
Lab File ID	: J230926D02	**Init. Calib. Date(s)**	: 09/13/23 09/14/23
Sample No	: WG1832480-2	**Init. Calib. Times**	: 08:49 06:31
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	2.224	2.105	-	5.4	20	172	0
n-Butylbenzene	2.997	3.125	-	-4.3	20	174	0
1,2-Dichlorobenzene	1.598	1.615	-	-1.1	20	179	0
1,2,4,5-Tetramethylbenzene	2.989	2.807	-	6.1	20	167	0
1,2-Dibromo-3-chloropropan	0.126	0.117	-	7.1	20	165	0
1,3,5-Trichlorobenzene	1.158	1.143	-	1.3	20	167	0
Hexachlorobutadiene	0.453	0.43	-	5.1	20	167	0
1,2,4-Trichlorobenzene	1.009	0.942	-	6.6	20	159	0
Naphthalene	2.636	2.464	-	6.5	20	162	0
1,2,3-Trichlorobenzene	0.917	0.882	-	3.8	20	167	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L2362800
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Joe Roman
Phone:	(781) 721-4000
Project Name:	31 TUFT'S STREET
Project Number:	045163
Report Date:	11/01/23

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (99110) , NJ (MA015), NY (11627), NC (685), OH (CL106), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: 31 TUFT'S STREET
Project Number: 045163

Lab Number: L2362800
Report Date: 11/01/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2362800-01	045163-31TUFT-IA1	AIR	SOMERVILLE, MA	10/17/23 08:35	10/23/23
L2362800-02	045163-31TUFT-IA2	AIR	SOMERVILLE, MA	10/17/23 08:50	10/23/23
L2362800-03	045163-31TUFT-IA3	AIR	SOMERVILLE, MA	10/17/23 08:40	10/23/23
L2362800-04	045163-31TUFT-SV-1	SOIL_VAPOR	SOMERVILLE, MA	10/17/23 13:00	10/23/23
L2362800-05	UNUSED CAN #3934	SOIL_VAPOR	SOMERVILLE, MA		10/23/23
L2362800-06	UNUSED CAN #2118	AIR	SOMERVILLE, MA		10/23/23

Project Name: 31 TUFT'S STREET **Lab Number:** L2362800

Project Number: 045163 **Report Date:** 11/01/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	NO
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	31 TUFT'S STREET	**Lab Number:**	L2362800
Project Number:	045163	**Report Date:**	11/01/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 31 TUFT'S STREET
Project Number: 045163
Lab Number: L2362800
Report Date: 11/01/23

Case Narrative (continued)

MCP Related Narratives

Canisters were released from the laboratory on October 13, 2023. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to questions E b/I:

All samples were analyzed for a subset of the MCP compounds per the Chain of Custody.

L2362800-04D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer Jerome

Title: Technical Director/Representative Date: 11/01/23

QC OUTLIER SUMMARY REPORT

Project Name: 31 TUFT'S STREET
Project Number: 045163

Lab Number: L2362800
Report Date: 11/01/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

AIR

Project Name: 31 TUFT'S STREET
Project Number: 045163

Lab Number: L2362800
Report Date: 11/01/23

SAMPLE RESULTS

Lab ID: L2362800-01
Client ID: 045163-31TUFT-IA1
Sample Location: SOMERVILLE, MA

Date Collected: 10/17/23 08:35
Date Received: 10/23/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 11/01/23 00:26
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	96		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140

Project Name: 31 TUFT'S STREET
Project Number: 045163

Lab Number: L2362800
Report Date: 11/01/23

SAMPLE RESULTS

Lab ID: L2362800-02
Client ID: 045163-31TUFT-IA2
Sample Location: SOMERVILLE, MA

Date Collected: 10/17/23 08:50
Date Received: 10/23/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 11/01/23 01:08
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.030	0.020	--	0.203	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	97		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	99		60-140

Project Name: 31 TUFT'S STREET
Project Number: 045163
Lab Number: L2362800
Report Date: 11/01/23

SAMPLE RESULTS

Lab ID: L2362800-03
Client ID: 045163-31TUFT-IA3
Sample Location: SOMERVILLE, MA

Date Collected: 10/17/23 08:40
Date Received: 10/23/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 101,TO-15-SIM
Analytical Date: 11/01/23 01:50
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.026	0.020	--	0.176	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	102		60-140
bromochloromethane	101		60-140
chlorobenzene-d5	103		60-140

Project Name: 31 TUFT'S STREET
Project Number: 045163

Lab Number: L2362800
Report Date: 11/01/23

SAMPLE RESULTS

Lab ID: L2362800-04 D
Client ID: 045163-31TUFT-SV-1
Sample Location: SOMERVILLE, MA

Date Collected: 10/17/23 13:00
Date Received: 10/23/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 101,TO-15-SIM
Analytical Date: 11/01/23 06:01
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.040	--	ND	0.102	--		2
1,1-Dichloroethene	ND	0.040	--	ND	0.159	--		2
trans-1,2-Dichloroethene	ND	0.040	--	ND	0.159	--		2
1,1-Dichloroethane	ND	0.040	--	ND	0.162	--		2
cis-1,2-Dichloroethene	ND	0.040	--	ND	0.159	--		2
1,1,1-Trichloroethane	0.526	0.040	--	2.87	0.218	--		2
Trichloroethene	0.256	0.040	--	1.38	0.215	--		2
1,1,2-Trichloroethane	ND	0.040	--	ND	0.218	--		2
Tetrachloroethene	8.65	0.040	--	58.7	0.271	--		2
1,1,2,2-Tetrachloroethane	ND	0.040	--	ND	0.275	--		2

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	107		60-140
bromochloromethane	111		60-140
chlorobenzene-d5	107		60-140

Project Name: 31 TUFT'S STREET
Project Number: 045163
Lab Number: L2362800
Report Date: 11/01/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 10/31/23 18:01

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-04 Batch: WG1846098-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 31 TUFT'S STREET

Project Number: 045163

Lab Number: L2362800

Report Date: 11/01/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04 Batch: WG1846098-3								
Vinyl chloride	104		-		70-130	-		
1,1-Dichloroethene	96		-		70-130	-		
trans-1,2-Dichloroethene	90		-		70-130	-		
1,1-Dichloroethane	89		-		70-130	-		
cis-1,2-Dichloroethene	93		-		70-130	-		
1,1,1-Trichloroethane	101		-		70-130	-		
Trichloroethene	107		-		70-130	-		
1,1,2-Trichloroethane	104		-		70-130	-		
Tetrachloroethene	87		-		70-130	-		
1,1,2,2-Tetrachloroethane	101		-		70-130	-		

Project Name: 31 TUFT'S STREET

Lab Number: L2362800

Project Number: 045163

Report Date: 11/01/23

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2362800-01	045163-31TUFT-IA1	02077	Flow 5	10/13/23	440794		-	-	-	Pass	3.1	2.7	14
L2362800-01	045163-31TUFT-IA1	2627	6.0L Can	10/13/23	440794	L2357309-10	Pass	-29.8	-9.4	-	-	-	-
L2362800-02	045163-31TUFT-IA2	01399	Flow 5	10/13/23	440794		-	-	-	Pass	3.0	3.3	10
L2362800-02	045163-31TUFT-IA2	2632	6.0L Can	10/13/23	440794	L2359465-03	Pass	-29.7	-8.2	-	-	-	-
L2362800-03	045163-31TUFT-IA3	01304	Flow 5	10/13/23	440794		-	-	-	Pass	3.1	3.0	3
L2362800-03	045163-31TUFT-IA3	588	6.0L Can	10/13/23	440794	L2357309-10	Pass	-29.8	-8.6	-	-	-	-
L2362800-04	045163-31TUFT-SV-1	01547	Flow 2	10/02/23	438669		-	-	-	Pass	36	38.3	6
L2362800-04	045163-31TUFT-SV-1	230	2.7L Can	10/13/23	440794	L2359630-01	Pass	-29.8	-6.3	-	-	-	-
L2362800-05	UNUSED CAN #3934	02370	Flow 1	10/02/23	438669		-	-	-	Pass	37	42.8	15
L2362800-05	UNUSED CAN #3934	3934	2.7L Can	10/13/23	440794	L2359630-01	Pass	-29.8	-23.2	-	-	-	-
L2362800-06	UNUSED CAN #2118	02360	Flow 1	10/13/23	440794		-	-	-	Pass	36.0	43.0	18
L2362800-06	UNUSED CAN #2118	2118	6.0L Can	10/13/23	440794	L2357309-10	Pass	-29.8	-30.0	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 09/30/23 02:39
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	91		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/30/23 02:39
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2357309
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2357309

Project Number: CANISTER QC BAT **Report Date:** 11/01/23

Air Canister Certification Results

Lab ID: L2357309-10
Client ID: CAN 934 SHELF 51
Sample Location:

Date Collected: 09/28/23 18:00
Date Received: 09/29/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	90		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 10/09/23 20:07
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	94		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 10/09/23 20:07
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359465
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359465-03
Client ID: CAN 745 SHELF 31
Sample Location:

Date Collected: 10/06/23 18:00
Date Received: 10/09/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	95		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359630
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 10/10/23 18:26
Analyst: BJB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359630
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359630
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359630
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359630
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	97		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2359630

Project Number: CANISTER QC BAT **Report Date:** 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 10/10/23 18:26
Analyst: BJB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2359630
Report Date: 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2359630

Project Number: CANISTER QC BAT **Report Date:** 11/01/23

Air Canister Certification Results

Lab ID: L2359630-01
Client ID: CAN 382 SHELF 21
Sample Location:

Date Collected: 10/09/23 18:00
Date Received: 10/10/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	91		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	96		60-140

Project Name: 31 TUFT'S STREET
Project Number: 045163

Lab Number: L2362800
Report Date: 11/01/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2362800-01A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2362800-02A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2362800-03A	Canister - 6 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2362800-04A	Canister - 2.7 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2362800-05A	Canister - 2.7 Liter	NA	NA			Y	Absent		CLEAN-FEE()
L2362800-06A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	31 TUFT'S STREET	**Lab Number:**	L2362800
Project Number:	045163	**Report Date:**	11/01/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	31 TUFT'S STREET	**Lab Number:**	L2362800
Project Number:	045163	**Report Date:**	11/01/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	31 TUFT'S STREET	**Lab Number:**	L2362800
Project Number:	045163	**Report Date:**	11/01/23

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	31 TUFT'S STREET	**Lab Number:**	L2362800
Project Number:	045163	**Report Date:**	11/01/23

REFERENCES

101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 10/23/23

ALPHA Job #: L2362800

Client Information

Client: ~~E3 Development~~ GEI ABI

Address: 400 Unicorn Park dr.

Phone:

Fax:

Email: labdata@geiconsultants.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 31 Tuft's Street

Project Location: somerville, Ma

Project #: 045163

Project Manager: JOE ROMAN

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX

☒ ADEx

Criteria Checker:

(Default based on Regulatory Criteria Indicated)

Other Formats:

☐ EMAIL (standard pdf report)

☐ Additional Deliverables:

Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments: see attached list

Project-Specific Target Compound List: ☒

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH Subtract Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
62800-01	045163-31Tuft's-IA1	10/17/23	0846	0835	-29.66	-9.63	AA	JES	6	2629	02077	X					
02	045163-31Tuft's-IA2	10/17/23	0858	0850	-29.67	-8.32	AA	JES	6	2632	01399	X					
03	045163-31Tuft's-IA3	10/17/23	0852	0840	-29.83	-9.00	AA	JES	6	588	01304	X					
04	045163-31Tuft's-SV-1	10/17/23	1200	13:00	-29.98	-6.53	SV	ABI	2.1	230	01547	X					
	~~045163-31Tuft's-SV-2~~	~~10/17/23~~	~~12:05~~ ABI		~~-29.96~~		~~SV~~	~~ABI~~		~~3924~~	~~02570~~						

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
R Mendoza ABL	10/23/23 1550		
Alexis Bilas GEI sample room	10/17/23 15:16	gei sample room fridge ABI	10/17/23 15:16
Madison Allen	10/23/23 1112	Madison Allen	10/23/23 1112
	10/23/23 1113	ABL	10/23/23 1113
	10/23/23 1717		10/23/23 1717

Form No: 101-02 Rev: (25-Sep-15)

Tufts Street IA/SV Analyte List

- Vinyl chloride
- 1,1-Dichloroethene
- trans-1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- 1,1,1-Trichloroethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane

Serial_No:11012319:25

ANALYTICAL REPORT

Lab Number:	L2364346
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS ST
Project Number:	045163
Report Date:	11/09/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (99110) , NJ (MA015), NY (11627), NC (685), OH (CL106), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: TUFTS ST
Project Number: 045163

Lab Number: L2364346
Report Date: 11/09/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2364346-01	045163-31TUFTSV2	SOIL_VAPOR	SOMERVILLE, MA	10/27/23 12:00	10/30/23

Project Name: TUFTS ST
Project Number: 045163
Lab Number: L2364346
Report Date: 11/09/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	NO
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	TUFTS ST	**Lab Number:**	L2364346
Project Number:	045163	**Report Date:**	11/09/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS ST
Project Number: 045163
Lab Number: L2364346
Report Date: 11/09/23

Case Narrative (continued)

MCP Related Narratives

Canisters were released from the laboratory on October 2, 2023. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to questions E b/I:

All samples were analyzed for a subset of the MCP compounds per the Chain of Custody.

Sample Receipt

L2364346-01: The sample had an RPD for the pre- and post-flow controller calibration check (27% RPD) that was outside of the control limit (20% RPD). The final pressure recorded by the laboratory of the associated canister was -4.0 inches of mercury. No further action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 11/09/23

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS ST
Project Number: 045163

Lab Number: L2364346
Report Date: 11/09/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

AIR

Project Name: TUFTS ST
Project Number: 045163
Lab Number: L2364346
Report Date: 11/09/23

SAMPLE RESULTS

Lab ID: L2364346-01
Client ID: 045163-31TUFTSV2
Sample Location: SOMERVILLE, MA

Date Collected: 10/27/23 12:00
Date Received: 10/30/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 101,TO-15-SIM
Analytical Date: 11/07/23 03:12
Analyst: RAY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.030	0.020	--	0.119	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	1.64	0.020	--	8.95	0.109	--		1
Trichloroethene	0.448	0.020	--	2.41	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	8.72	0.020	--	59.1	0.136	--		1
1,1,2,2-Tetrachloroethane	0.204	0.020	--	1.40	0.137	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	92		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	103		60-140

Project Name: TUFTS ST
Project Number: 045163
Lab Number: L2364346
Report Date: 11/09/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 101,TO-15-SIM
Analytical Date: 11/06/23 19:31

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01 Batch: WG1848931-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS ST

Project Number: 045163

Lab Number: L2364346

Report Date: 11/09/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01 Batch: WG1848931-3								
Vinyl chloride	103		-		70-130	-		
1,1-Dichloroethene	96		-		70-130	-		
trans-1,2-Dichloroethene	89		-		70-130	-		
1,1-Dichloroethane	89		-		70-130	-		
cis-1,2-Dichloroethene	93		-		70-130	-		
1,1,1-Trichloroethane	102		-		70-130	-		
Trichloroethene	107		-		70-130	-		
1,1,2-Trichloroethane	102		-		70-130	-		
Tetrachloroethene	85		-		70-130	-		
1,1,2,2-Tetrachloroethane	98		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: TUFTS ST
Project Number: 045163

Lab Number: L2364346
Report Date: 11/09/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1848931-5 QC Sample: L2364346-01 Client ID: 045163-31TUFTSV2						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	0.030	0.035	ppbV	15		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	1.64	1.64	ppbV	0		25
Trichloroethene	0.448	0.473	ppbV	5		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Tetrachloroethene	8.72	9.40	ppbV	8		25
1,1,2,2-Tetrachloroethane	0.204	0.214	ppbV	5		25

Project Name: TUFTS ST

Project Number: 045163

Lab Number: L2364346

Report Date: 11/09/23

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2364346-01	045163-31TUFTSV2	0877	Flow 2	10/02/23	438669		-	-	-	Pass	36	47.2	27
L2364346-01	045163-31TUFTSV2	3198	2.7L Can	10/02/23	438669	L2355780-01	Pass	-30.2	-4.0	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 09/22/23 17:07
Analyst: BJB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	91		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	88		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 09/22/23 17:07
Analyst: BJB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2355780

Project Number: CANISTER QC BAT **Report Date:** 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2355780
Report Date: 11/09/23

Air Canister Certification Results

Lab ID: L2355780-01
Client ID: CAN 1723 SHELF 0
Sample Location:

Date Collected: 09/21/23 18:00
Date Received: 09/22/23
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	81		60-140
bromochloromethane	89		60-140
chlorobenzene-d5	85		60-140

Project Name: TUFTS ST
Project Number: 045163

Lab Number: L2364346
Report Date: 11/09/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2364346-01A	Canister - 2.7 Liter	NA	NA			Y	Absent		MCP-TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name:	TUFTS ST	**Lab Number:**	L2364346
Project Number:	045163	**Report Date:**	11/09/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	TUFTS ST	**Lab Number:**	L2364346
Project Number:	045163	**Report Date:**	11/09/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	TUFTS ST	**Lab Number:**	L2364346
Project Number:	045163	**Report Date:**	11/09/23

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	TUFTS ST	**Lab Number:**	L2364346
Project Number:	045163	**Report Date:**	11/09/23

REFERENCES

101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 10/30/23 ~~10/30/25~~ EJD

ALPHA Job #: L2364346

Client Information

Client: GEI Consultants
Address: 400 Unicorn Park Dr.
Woburn, MA 01801
Phone: 781-721-4000
Fax: —
Email: labdata@geiconsultants.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Tufts 57
Project Location: Somerville, MA
Project #: 045163
Project Manager: Chris Coner
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☒ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☒ see attached analyte list

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH Subset Nonpetroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
64346-01	045163-31TUFTSV2	10/27/23	11:00	12:00	-30.07	-3.45	SV	DJM	2.7L	3198	0877	X					

ANALYSIS

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Dave Hill	10/27/23 13:15	GEI Field Room	10/27/23 13:15
Field Room	10/30/23 1406		10/30/23 1406
AAL	10-30-23 1735	AAL	10-30-23 1406
			10/30/23 1735

(25-Sep-15)

Page 27 of 28

Tufts Street IA/SV Analyte List

- Vinyl chloride
- 1,1-Dichloroethene
- trans-1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- 1,1,1-Trichloroethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane

Serial_No:11092316:38

ANALYTICAL REPORT

Lab Number:	L2366389
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	11/17/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2366389
Report Date: 11/17/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2366389-01	045163-MW112A	WATER	SOMERVILLE, MA	11/07/23 11:15	11/08/23
L2366389-02	045163-MW121D	WATER	SOMERVILLE, MA	11/07/23 12:45	11/08/23
L2366389-03	045163-MW118D	WATER	SOMERVILLE, MA	11/07/23 14:25	11/08/23
L2366389-04	045163-MW122	WATER	SOMERVILLE, MA	11/07/23 15:00	11/08/23

Project Name: TUFTS STREET **Lab Number:** L2366389

Project Number: 045163 **Report Date:** 11/17/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	TUFTS STREET	**Lab Number:**	L2366389
Project Number:	045163	**Report Date:**	11/17/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	TUFTS STREET	**Lab Number:**	L2366389
Project Number:	045163	**Report Date:**	11/17/23

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

L2366389-04D: A copy of the continuing calibration standard is included as an addendum to this report.

In reference to question G:

L2366389-01D: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L2366389-01D, -02, -03, and -04: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: cis-1,2-dichloroethene (0.1584), bromochloromethane (0.0701), 1,2-dichloropropane (0.1925), bromodichloromethane (0.2465), 1,4-dioxane (0.0011), cis-1,3-dichloropropane (0.2947), 1,1,2-trichloroethane (0.1343), 1,2-dibromoethane (0.1634)

Average Response Factor: cis-1,2-dichloroethene, bromochloromethane, bromodichloromethane, 1,4-dioxane, 1,1,2-trichloroethane, 1,2-dibromoethane

Initial Calibration Verification: dichlorodifluoromethane (66%)

L2366389-01D, -02, -03, and -04: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 11/17/23

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2366389
Report Date: 11/17/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

ORGANICS

VOLATILES

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-01 D
Client ID: 045163-MW112A
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 11:15
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 141,8260D
Analytical Date: 11/16/23 13:04
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	10	--	5
1,1-Dichloroethane	39		ug/l	5.0	--	5
Chloroform	ND		ug/l	5.0	--	5
Carbon tetrachloride	ND		ug/l	5.0	--	5
1,2-Dichloropropane	ND		ug/l	5.0	--	5
Dibromochloromethane	ND		ug/l	5.0	--	5
1,1,2-Trichloroethane	ND		ug/l	5.0	--	5
Tetrachloroethene	460		ug/l	5.0	--	5
Chlorobenzene	ND		ug/l	5.0	--	5
Trichlorofluoromethane	ND		ug/l	10	--	5
1,2-Dichloroethane	ND		ug/l	5.0	--	5
1,1,1-Trichloroethane	5.4		ug/l	5.0	--	5
Bromodichloromethane	ND		ug/l	5.0	--	5
trans-1,3-Dichloropropene	ND		ug/l	2.0	--	5
cis-1,3-Dichloropropene	ND		ug/l	2.0	--	5
1,3-Dichloropropene, Total	ND		ug/l	2.0	--	5
1,1-Dichloropropene	ND		ug/l	10	--	5
Bromoform	ND		ug/l	10	--	5
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Benzene	ND		ug/l	2.5	--	5
Toluene	ND		ug/l	5.0	--	5
Ethylbenzene	ND		ug/l	5.0	--	5
Chloromethane	ND		ug/l	10	--	5
Bromomethane	ND		ug/l	10	--	5
Vinyl chloride	11		ug/l	5.0	--	5
Chloroethane	ND		ug/l	10	--	5
1,1-Dichloroethene	53		ug/l	5.0	--	5
trans-1,2-Dichloroethene	ND		ug/l	5.0	--	5

Project Name: TUFTS STREET **Lab Number:** L2366389

Project Number: 045163 **Report Date:** 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-01 D
Client ID: 045163-MW112A
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 11:15
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	110		ug/l	5.0	--	5
1,2-Dichlorobenzene	ND		ug/l	5.0	--	5
1,3-Dichlorobenzene	ND		ug/l	5.0	--	5
1,4-Dichlorobenzene	ND		ug/l	5.0	--	5
Methyl tert butyl ether	15		ug/l	10	--	5
p/m-Xylene	ND		ug/l	10	--	5
o-Xylene	ND		ug/l	5.0	--	5
Xylenes, Total	ND		ug/l	5.0	--	5
cis-1,2-Dichloroethene	64		ug/l	5.0	--	5
1,2-Dichloroethene, Total	64		ug/l	5.0	--	5
Dibromomethane	ND		ug/l	10	--	5
1,2,3-Trichloropropane	ND		ug/l	10	--	5
Styrene	ND		ug/l	5.0	--	5
Dichlorodifluoromethane	ND		ug/l	10	--	5
Acetone	ND		ug/l	25	--	5
Carbon disulfide	ND		ug/l	10	--	5
Methyl ethyl ketone	ND		ug/l	25	--	5
Methyl isobutyl ketone	ND		ug/l	25	--	5
2-Hexanone	ND		ug/l	25	--	5
Bromochloromethane	ND		ug/l	10	--	5
Tetrahydrofuran	ND		ug/l	10	--	5
2,2-Dichloropropane	ND		ug/l	10	--	5
1,2-Dibromoethane	ND		ug/l	10	--	5
1,3-Dichloropropane	ND		ug/l	10	--	5
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Bromobenzene	ND		ug/l	10	--	5
n-Butylbenzene	ND		ug/l	10	--	5
sec-Butylbenzene	ND		ug/l	10	--	5
tert-Butylbenzene	ND		ug/l	10	--	5
o-Chlorotoluene	ND		ug/l	10	--	5
p-Chlorotoluene	ND		ug/l	10	--	5
1,2-Dibromo-3-chloropropane	ND		ug/l	10	--	5
Hexachlorobutadiene	ND		ug/l	3.0	--	5
Isopropylbenzene	ND		ug/l	10	--	5
p-Isopropyltoluene	ND		ug/l	10	--	5
Naphthalene	ND		ug/l	10	--	5
n-Propylbenzene	ND		ug/l	10	--	5

Project Name: TUFTS STREET **Lab Number:** L2366389

Project Number: 045163 **Report Date:** 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-01 D
Client ID: 045163-MW112A
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 11:15
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	10	--	5
1,2,4-Trichlorobenzene	ND		ug/l	10	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10	--	5
Diethyl ether	ND		ug/l	10	--	5
Diisopropyl Ether	ND		ug/l	10	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10	--	5
1,4-Dioxane	ND		ug/l	1200	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	106		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-02
Client ID: 045163-MW121D
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 12:45
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 141,8260D
Analytical Date: 11/16/23 10:24
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	25		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	35		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	3.2		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	5.7		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: TUFTS STREET **Lab Number:** L2366389

Project Number: 045163 **Report Date:** 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-02 Date Collected: 11/07/23 12:45

Client ID: 045163-MW121D Date Received: 11/08/23

Sample Location: SOMERVILLE, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	23		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	2.1		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	16		ug/l	1.0	--	1
1,2-Dichloroethene, Total	16		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-02
Client ID: 045163-MW121D
Sample Location: SOMERVILLE, MA
Date Collected: 11/07/23 12:45
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	104		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-03
Client ID: 045163-MW118D
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 14:25
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 141,8260D
Analytical Date: 11/16/23 10:47
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	26		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	1.5		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	1.3		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: TUFTS STREET **Lab Number:** L2366389

Project Number: 045163 **Report Date:** 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-03 Date Collected: 11/07/23 14:25

Client ID: 045163-MW118D Date Received: 11/08/23

Sample Location: SOMERVILLE, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	1.3		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	3.1		ug/l	1.0	--	1
1,2-Dichloroethene, Total	3.1		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-03
Client ID: 045163-MW118D
Sample Location: SOMERVILLE, MA
Date Collected: 11/07/23 14:25
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	106		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-04
Client ID: 045163-MW122
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 15:00
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 141,8260D
Analytical Date: 11/16/23 11:10
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	16		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	1700	E	ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	1.6		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	7.7		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: TUFTS STREET **Lab Number:** L2366389

Project Number: 045163 **Report Date:** 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-04 Date Collected: 11/07/23 15:00

Client ID: 045163-MW122 Date Received: 11/08/23

Sample Location: SOMERVILLE, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	200		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	2.9		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	130		ug/l	1.0	--	1
1,2-Dichloroethene, Total	130		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-04
Client ID: 045163-MW122
Sample Location: SOMERVILLE, MA
Date Collected: 11/07/23 15:00
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	101		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

SAMPLE RESULTS

Lab ID: L2366389-04 D
Client ID: 045163-MW122
Sample Location: SOMERVILLE, MA

Date Collected: 11/07/23 15:00
Date Received: 11/08/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 141,8260D
Analytical Date: 11/17/23 05:52
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Tetrachloroethene	1600		ug/l	20	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	103		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/16/23 05:05
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG1853496-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/16/23 05:05
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG1853496-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/16/23 05:05
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-04 Batch: WG1853496-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	99		70-130

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/17/23 04:21
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 04 Batch: WG1853609-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/17/23 04:21
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 04 Batch: WG1853609-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: TUFTS STREET
Project Number: 045163
Lab Number: L2366389
Report Date: 11/17/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/17/23 04:21
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 04 Batch: WG1853609-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	104		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1853496-3 WG1853496-4								
Methylene chloride	97		98		70-130	1		20
1,1-Dichloroethane	100		110		70-130	10		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	100		100		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	120		120		70-130	0		20
Tetrachloroethene	110		100		70-130	10		20
Chlorobenzene	110		110		70-130	0		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	100		110		70-130	10		20
Bromoform	110		120		70-130	9		20
1,1,2,2-Tetrachloroethane	120		120		70-130	0		20
Benzene	100		110		70-130	10		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		120		70-130	9		20
Chloromethane	100		100		70-130	0		20
Bromomethane	81		86		70-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1853496-3 WG1853496-4								
Vinyl chloride	100		100		70-130	0		20
Chloroethane	96		99		70-130	3		20
1,1-Dichloroethene	96		96		70-130	0		20
trans-1,2-Dichloroethene	94		97		70-130	3		20
Trichloroethene	99		100		70-130	1		20
1,2-Dichlorobenzene	120		120		70-130	0		20
1,3-Dichlorobenzene	120		120		70-130	0		20
1,4-Dichlorobenzene	120		110		70-130	9		20
Methyl tert butyl ether	100		110		70-130	10		20
p/m-Xylene	115		115		70-130	0		20
o-Xylene	115		115		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	120		120		70-130	0		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	100		99		70-130	1		20
Acetone	120		120		70-130	0		20
Carbon disulfide	94		95		70-130	1		20
Methyl ethyl ketone	100		100		70-130	0		20
Methyl isobutyl ketone	120		120		70-130	0		20
2-Hexanone	120		120		70-130	0		20
Bromochloromethane	110		110		70-130	0		20
Tetrahydrofuran	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1853496-3 WG1853496-4								
2,2-Dichloropropane	100		100		70-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	120		120		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	110		110		70-130	0		20
n-Butylbenzene	110		110		70-130	0		20
sec-Butylbenzene	120		120		70-130	0		20
tert-Butylbenzene	120		120		70-130	0		20
o-Chlorotoluene	120		120		70-130	0		20
p-Chlorotoluene	120		120		70-130	0		20
1,2-Dibromo-3-chloropropane	110		110		70-130	0		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	120		120		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	100		100		70-130	0		20
n-Propylbenzene	120		120		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	120		120		70-130	0		20
1,2,4-Trimethylbenzene	110		120		70-130	9		20
Diethyl ether	100		100		70-130	0		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-04 Batch: WG1853496-3 WG1853496-4								
Tertiary-Amyl Methyl Ether	110		120		70-130	9		20
1,4-Dioxane	88		94		70-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		102		70-130
Toluene-d8	102		100		70-130
4-Bromofluorobenzene	103		104		70-130
Dibromofluoromethane	97		96		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2366389
Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04 Batch: WG1853609-3 WG1853609-4								
Methylene chloride	94		100		70-130	6		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	98		110		70-130	12		20
1,2-Dichloropropane	110		120		70-130	9		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	110		120		70-130	9		20
Tetrachloroethene	100		110		70-130	10		20
Chlorobenzene	110		120		70-130	9		20
Trichlorofluoromethane	96		100		70-130	4		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	97		100		70-130	3		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	110		120		70-130	9		20
cis-1,3-Dichloropropene	100		110		70-130	10		20
1,1-Dichloropropene	99		100		70-130	1		20
Bromoform	100		110		70-130	10		20
1,1,2,2-Tetrachloroethane	110		120		70-130	9		20
Benzene	100		110		70-130	10		20
Toluene	100		110		70-130	10		20
Ethylbenzene	110		120		70-130	9		20
Chloromethane	110		120		70-130	9		20
Bromomethane	84		90		70-130	7		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04 Batch: WG1853609-3 WG1853609-4								
Vinyl chloride	100		110		70-130	10		20
Chloroethane	99		110		70-130	11		20
1,1-Dichloroethene	93		100		70-130	7		20
trans-1,2-Dichloroethene	95		99		70-130	4		20
Trichloroethene	100		110		70-130	10		20
1,2-Dichlorobenzene	110		120		70-130	9		20
1,3-Dichlorobenzene	110		120		70-130	9		20
1,4-Dichlorobenzene	110		120		70-130	9		20
Methyl tert butyl ether	95		100		70-130	5		20
p/m-Xylene	110		120		70-130	9		20
o-Xylene	110		120		70-130	9		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	110		120		70-130	9		20
Styrene	105		115		70-130	9		20
Dichlorodifluoromethane	99		110		70-130	11		20
Acetone	120		110		70-130	9		20
Carbon disulfide	100		98		70-130	2		20
Methyl ethyl ketone	93		95		70-130	2		20
Methyl isobutyl ketone	100		100		70-130	0		20
2-Hexanone	96		100		70-130	4		20
Bromochloromethane	100		110		70-130	10		20
Tetrahydrofuran	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04 Batch: WG1853609-3 WG1853609-4								
2,2-Dichloropropane	100		110		70-130	10		20
1,2-Dibromoethane	110		110		70-130	0		20
1,3-Dichloropropane	120		120		70-130	0		20
1,1,1,2-Tetrachloroethane	110		120		70-130	9		20
Bromobenzene	110		120		70-130	9		20
n-Butylbenzene	100		110		70-130	10		20
sec-Butylbenzene	110		120		70-130	9		20
tert-Butylbenzene	100		120		70-130	18		20
o-Chlorotoluene	110		120		70-130	9		20
p-Chlorotoluene	110		120		70-130	9		20
1,2-Dibromo-3-chloropropane	96		100		70-130	4		20
Hexachlorobutadiene	100		100		70-130	0		20
Isopropylbenzene	100		120		70-130	18		20
p-Isopropyltoluene	99		110		70-130	11		20
Naphthalene	86		93		70-130	8		20
n-Propylbenzene	110		120		70-130	9		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	91		100		70-130	9		20
1,3,5-Trimethylbenzene	110		120		70-130	9		20
1,2,4-Trimethylbenzene	100		120		70-130	18		20
Diethyl ether	96		100		70-130	4		20
Diisopropyl Ether	110		110		70-130	0		20
Ethyl-Tert-Butyl-Ether	99		110		70-130	11		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2366389

Report Date: 11/17/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 04 Batch: WG1853609-3 WG1853609-4								
Tertiary-Amyl Methyl Ether	99		110		70-130	11		20
1,4-Dioxane	86		82		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		100		70-130
Toluene-d8	100		102		70-130
4-Bromofluorobenzene	97		101		70-130
Dibromofluoromethane	101		97		70-130

Project Name: TUFTS STREET
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Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2366389-01A	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-01B	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-01C	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-02A	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-02B	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-02C	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-03A	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-03B	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-03C	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-04A	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-04B	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)
L2366389-04C	Vial HCl preserved	A	NA		5.3	Y	Absent		MCP-8260-21(14)

*Values in parentheses indicate holding time in days

Project Name:	TUFTS STREET	**Lab Number:**	L2366389
Project Number:	045163	**Report Date:**	11/17/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2366389
Project Number:	045163	**Report Date:**	11/17/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2366389
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Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	TUFTS STREET	**Lab Number:**	L2366389
Project Number:	045163	**Report Date:**	11/17/23

REFERENCES

141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 11/8/23

ALPHA Job #: L2316389

ALPHA ANALYTICAL
8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Project Information

Project Name: Tufts Street
Project Location: Somerville, MA
Project #: 045163
Project Manager: Chris Coner
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Client Information

Client: GEI Consultants
Address: 400 Unicorn Park Dr
Woburn, MA, 01801
Phone: 781-721-4000
Email: Cconer@geiconsultants.com

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods
☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☒ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:

ANALYSIS

VOC: ☒ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Sample Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: 8260	Total # Bottles
L2316389-01	045163-MW112A	11/7/23	11:15	GW	NMT	X	
-02	045163-MW121D	11/7/23	12:45	GW	NMT	X	
-03	045163-MW118D	11/7/23	14:25	GW	NMT	X	
-04	045163-MW122	11/7/23	15:00	GW	NMT	X	

Container Type																															
Preservative																															

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
Nicholas Imbriaco	11/7/23 16:50	GEI Fridge	11/7/23 16:50
GEI Fridge	11/8/23 1220	Madison Allstar	11/8/23 1220
Madison Allstar	11/8/23 1221	AAL	11-8-23 1221

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Method Blank Summary
Form 4
Volatiles

Client	: GEI Consultants	**Lab Number**	: L2366389
Project Name	: TUFTS STREET	**Project Number**	: 045163
Lab Sample ID	: WG1853496-5	**Lab File ID**	: VQ231116A05
Instrument ID	: QUIMBY		
Matrix	: WATER	**Analysis Date**	: 11/16/23 05:05

Client Sample No.	Lab Sample ID	Analysis Date
WG1853496-3LCS	WG1853496-3	11/16/23 03:57
WG1853496-4LCSD	WG1853496-4	11/16/23 04:20
045163-MW121D	L2366389-02	11/16/23 10:24
045163-MW118D	L2366389-03	11/16/23 10:47
045163-MW122	L2366389-04	11/16/23 11:10
045163-MW112A	L2366389-01D	11/16/23 13:04

Method Blank Summary
Form 4
Volatiles

Client	: GEI Consultants	**Lab Number**	: L2366389
Project Name	: TUFTS STREET	**Project Number**	: 045163
Lab Sample ID	: WG1853609-5	**Lab File ID**	: VQ231117A04
Instrument ID	: QUIMBY		
Matrix	: WATER	**Analysis Date**	: 11/17/23 04:21

Client Sample No.	Lab Sample ID	Analysis Date
WG1853609-3LCS	WG1853609-3	11/17/23 03:13
WG1853609-4LCSD	WG1853609-4	11/17/23 03:35
045163-MW122	L2366389-04D	11/17/23 05:52

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants		**Lab Number**	: L2366389	
Project Name	: TUFTS STREET		**Project Number**	: 045163	
Instrument ID	: QUIMBY		**Calibration Date**	: 11/16/23 03:57	
Lab File ID	: VQ231116A02		**Init. Calib. Date(s)**	: 11/14/23	11/14/23
Sample No	: WG1853496-2		**Init. Calib. Times**	: 05:41	08:21
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	117	0
Dichlorodifluoromethane	0.31	0.313	-	-1	20	109	0
Chloromethane	0.289	0.297	-	-2.8	20	116	0
Vinyl chloride	0.272	0.282	-	-3.7	20	110	0
Bromomethane	0.146	0.118	-	19.2	20	95	0
Chloroethane	0.151	0.145	-	4	20	108	0
Trichlorofluoromethane	0.355	0.354	-	0.3	20	107	0
Ethyl ether	0.095	0.096	-	-1.1	20	112	0
1,1-Dichloroethene	0.174	0.167	-	4	20	107	0
Carbon disulfide	0.504	0.471	-	6.5	20	105	0
Freon-113	0.192	0.184	-	4.2	20	106	-.01
Acrolein	0.023	0.021	-	8.7	20	112	0
Methylene chloride	0.199	0.194	-	2.5	20	107	0
Acetone	0.045	0.054	-	-20	20	134	0
trans-1,2-Dichloroethene	0.182	0.171	-	6	20	104	0
Methyl acetate	0.115	0.114	-	0.9	20	116	0
Methyl tert-butyl ether	0.542	0.566	-	-4.4	20	114	0
tert-Butyl alcohol	0.016	0.017	-	-6.3	20	119	0
Diisopropyl ether	0.756	0.835	-	-10.4	20	122	0
1,1-Dichloroethane	0.396	0.415	-	-4.8	20	113	0
Halothane	0.13	0.133	-	-2.3	20	112	-.01
Acrylonitrile	0.048	0.052	-	-8.3	20	121	0
Ethyl tert-butyl ether	0.648	0.717	-	-10.6	20	123	0
Vinyl acetate	0.389	0.443	-	-13.9	20	135	0
cis-1,2-Dichloroethene	0.192	0.205	-	-6.8	20	116	0
2,2-Dichloropropane	0.36	0.364	-	-1.1	20	112	0
Bromochloromethane	0.087	0.092*	-	-5.7	20	115	-.01
Cyclohexane	0.374	0.393	-	-5.1	20	118	0
Chloroform	0.366	0.394	-	-7.7	20	118	0
Ethyl acetate	0.164	0.178	-	-8.5	20	124	0
Carbon tetrachloride	0.3	0.309	-	-3	20	108	0
Tetrahydrofuran	0.05	0.055	-	-10	20	124	0
Dibromofluoromethane	0.267	0.259	-	3	20	110	0
1,1,1-Trichloroethane	0.353	0.355	-	-0.6	20	109	0
2-Butanone	0.079	0.079	-	0	20	124	0
1,1-Dichloropropene	0.272	0.283	-	-4	20	116	0
Benzene	0.766	0.802	-	-4.7	20	114	0
tert-Amyl methyl ether	0.506	0.57	-	-12.6	20	126	0
1,2-Dichloroethane-d4	0.387	0.394	-	-1.8	20	112	0
1,2-Dichloroethane	0.32	0.345	-	-7.8	20	114	0
Methyl cyclohexane	0.323	0.316	-	2.2	20	118	-.01
Trichloroethene	0.204	0.202	-	1	20	111	0
Dibromomethane	0.113	0.124	-	-9.7	20	121	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants		**Lab Number**	: L2366389	
Project Name	: TUFTS STREET		**Project Number**	: 045163	
Instrument ID	: QUIMBY		**Calibration Date**	: 11/16/23 03:57	
Lab File ID	: VQ231116A02		**Init. Calib. Date(s)**	: 11/14/23	11/14/23
Sample No	: WG1853496-2		**Init. Calib. Times**	: 05:41	08:21
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.213	0.235	-	-10.3	20	124	0
2-Chloroethyl vinyl ether	0.099	0.107	-	-8.1	20	137	0
Bromodichloromethane	0.288	0.315	-	-9.4	20	121	0
1,4-Dioxane	0.00123	0.00107*	-	13	20	99	-.01
cis-1,3-Dichloropropene	0.321	0.363	-	-13.1	20	126	0
Chlorobenzene-d5	1	1	-	0	20	114	0
Toluene-d8	1.413	1.434	-	-1.5	20	114	0
Toluene	0.633	0.701	-	-10.7	20	121	-.01
4-Methyl-2-pentanone	0.069	0.08	-	-15.9	20	140	0
Tetrachloroethene	0.265	0.282	-	-6.4	20	116	0
trans-1,3-Dichloropropene	0.391	0.45	-	-15.1	20	125	0
Ethyl methacrylate	0.218	0.252	-	-15.6	20	133	0
1,1,2-Trichloroethane	0.168	0.202	-	-20.2*	20	127	-.01
Chlorodibromomethane	0.248	0.279	-	-12.5	20	123	0
1,3-Dichloropropane	0.365	0.431	-	-18.1	20	126	0
1,2-Dibromoethane	0.186	0.209	-	-12.4	20	122	0
2-Hexanone	0.123	0.145	-	-17.9	20	142	0
Chlorobenzene	0.646	0.732	-	-13.3	20	122	0
Ethylbenzene	1.17	1.343	-	-14.8	20	122	-.01
1,1,1,2-Tetrachloroethane	0.259	0.292	-	-12.7	20	122	0
p/m Xylene	0.427	0.493	-	-15.5	20	124	0
o Xylene	0.41	0.48	-	-17.1	20	123	0
Styrene	20	22.474	-	-12.4	20	127	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	111	0
Bromoform	0.27	0.308	-	-14.1	20	123	-.01
Isopropylbenzene	1.777	2.132	-	-20	20	125	-.01
4-Bromofluorobenzene	0.92	0.949	-	-3.2	20	116	0
Bromobenzene	0.474	0.543	-	-14.6	20	120	0
n-Propylbenzene	2.21	2.673	-	-21*	20	123	0
1,4-Dichlorobutane	0.619	0.743	-	-20	20	128	0
1,1,2,2-Tetrachloroethane	0.389	0.465	-	-19.5	20	131	0
4-Ethyltoluene	1.793	2.16	-	-20.5*	20	124	0
2-Chlorotoluene	1.668	2.006	-	-20.3*	20	123	0
1,3,5-Trimethylbenzene	1.598	1.898	-	-18.8	20	122	-.01
1,2,3-Trichloropropane	0.348	0.432	-	-24.1*	20	134	-.01
trans-1,4-Dichloro-2-buten	0.14	0.164	-	-17.1	20	126	-.01
4-Chlorotoluene	1.473	1.79	-	-21.5*	20	124	-.01
tert-Butylbenzene	1.284	1.549	-	-20.6*	20	125	0
1,2,4-Trimethylbenzene	1.656	1.904	-	-15	20	124	0
sec-Butylbenzene	1.791	2.186	-	-22.1*	20	123	0
p-Isopropyltoluene	10	10.913	-	-9.1	20	124	-.01
1,3-Dichlorobenzene	0.915	1.053	-	-15.1	20	120	0
1,4-Dichlorobenzene	0.937	1.08	-	-15.3	20	121	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants		**Lab Number**	: L2366389	
Project Name	: TUFTS STREET		**Project Number**	: 045163	
Instrument ID	: QUIMBY		**Calibration Date**	: 11/16/23 03:57	
Lab File ID	: VQ231116A02		**Init. Calib. Date(s)**	: 11/14/23	11/14/23
Sample No	: WG1853496-2		**Init. Calib. Times**	: 05:41	08:21
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.017	1.112	-	-9.3	20	126	0
n-Butylbenzene	10	10.846	-	-8.5	20	124	-.01
1,2-Dichlorobenzene	0.875	1.014	-	-15.9	20	121	0
1,2,4,5-Tetramethylbenzene	1.621	1.789	-	-10.4	20	127	-.01
1,2-Dibromo-3-chloropropan	0.064	0.069	-	-7.8	20	124	0
1,3,5-Trichlorobenzene	0.701	0.764	-	-9	20	117	0
Hexachlorobutadiene	0.248	0.267	-	-7.7	20	124	-.01
1,2,4-Trichlorobenzene	0.663	0.672	-	-1.4	20	123	0
Naphthalene	10	10.373	-	-3.7	20	127	0
1,2,3-Trichlorobenzene	0.577	0.654	-	-13.3	20	123	-.01

*** Value outside of QC limits.**

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants		**Lab Number**	: L2366389	
Project Name	: TUFTS STREET		**Project Number**	: 045163	
Instrument ID	: QUIMBY		**Calibration Date**	: 11/17/23 03:13	
Lab File ID	: VQ231117A01		**Init. Calib. Date(s)**	: 11/14/23	11/14/23
Sample No	: WG1853609-2		**Init. Calib. Times**	: 05:41	08:21
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	105	0
Dichlorodifluoromethane	0.31	0.305	-	1.6	20	95	0
Chloromethane	0.289	0.319	-	-10.4	20	112	0
Vinyl chloride	0.272	0.288	-	-5.9	20	100	0
Bromomethane	0.146	0.122	-	16.4	20	88	0
Chloroethane	0.151	0.15	-	0.7	20	100	0
Trichlorofluoromethane	0.355	0.34	-	4.2	20	92	0
Ethyl ether	0.095	0.092	-	3.2	20	96	0
1,1-Dichloroethene	0.174	0.163	-	6.3	20	93	0
Carbon disulfide	0.504	0.508	-	-0.8	20	102	0
Freon-113	0.192	0.187	-	2.6	20	96	-.01
Acrolein	0.023	0.024	-	-4.3	20	117	0
Methylene chloride	0.199	0.187	-	6	20	93	-.01
Acetone	0.045	0.056	-	-24.4*	20	126	-.02
trans-1,2-Dichloroethene	0.182	0.173	-	4.9	20	95	0
Methyl acetate	0.115	0.12	-	-4.3	20	110	-.01
Methyl tert-butyl ether	0.542	0.516	-	4.8	20	93	0
tert-Butyl alcohol	0.016	0.016	-	0	20	101	-.01
Diisopropyl ether	0.756	0.811	-	-7.3	20	107	0
1,1-Dichloroethane	0.396	0.427	-	-7.8	20	104	0
Halothane	0.13	0.137	-	-5.4	20	102	-.01
Acrylonitrile	0.048	0.049	-	-2.1	20	101	-.01
Ethyl tert-butyl ether	0.648	0.644	-	0.6	20	99	-.01
Vinyl acetate	0.389	0.435	-	-11.8	20	119	0
cis-1,2-Dichloroethene	0.192	0.2*	-	-4.2	20	101	0
2,2-Dichloropropane	0.36	0.37	-	-2.8	20	102	0
Bromochloromethane	0.087	0.087*	-	0	20	97	-.01
Cyclohexane	0.374	0.379	-	-1.3	20	102	-.01
Chloroform	0.366	0.385	-	-5.2	20	103	-.01
Ethyl acetate	0.164	0.163	-	0.6	20	101	-.01
Carbon tetrachloride	0.3	0.294	-	2	20	93	0
Tetrahydrofuran	0.05	0.053	-	-6	20	108	-.01
Dibromofluoromethane	0.267	0.27	-	-1.1	20	103	-.01
1,1,1-Trichloroethane	0.353	0.344	-	2.5	20	95	-.01
2-Butanone	0.079	0.073	-	7.6	20	103	-.01
1,1-Dichloropropene	0.272	0.268	-	1.5	20	99	-.01
Benzene	0.766	0.795	-	-3.8	20	101	0
tert-Amyl methyl ether	0.506	0.502	-	0.8	20	99	-.01
1,2-Dichloroethane-d4	0.387	0.409	-	-5.7	20	104	0
1,2-Dichloroethane	0.32	0.342	-	-6.9	20	102	0
Methyl cyclohexane	0.323	0.298	-	7.7	20	100	-.01
Trichloroethene	0.204	0.207	-	-1.5	20	101	0
Dibromomethane	0.113	0.122	-	-8	20	107	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants		**Lab Number**	: L2366389	
Project Name	: TUFTS STREET		**Project Number**	: 045163	
Instrument ID	: QUIMBY		**Calibration Date**	: 11/17/23 03:13	
Lab File ID	: VQ231117A01		**Init. Calib. Date(s)**	: 11/14/23	11/14/23
Sample No	: WG1853609-2		**Init. Calib. Times**	: 05:41	08:21
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.213	0.231	-	-8.5	20	109	-.01
2-Chloroethyl vinyl ether	0.099	0.088	-	11.1	20	100	0
Bromodichloromethane	0.288	0.308	-	-6.9	20	106	-.01
1,4-Dioxane	0.00123	0.00105*	-	14.6	20	87	-.01
cis-1,3-Dichloropropene	0.321	0.336	-	-4.7	20	105	-.01
Chlorobenzene-d5	1	1	-	0	20	103	0
Toluene-d8	1.413	1.416	-	-0.2	20	101	-.01
Toluene	0.633	0.667	-	-5.4	20	104	-.01
4-Methyl-2-pentanone	0.069	0.071	-	-2.9	20	112	-.01
Tetrachloroethene	0.265	0.268	-	-1.1	20	99	0
trans-1,3-Dichloropropene	0.391	0.422	-	-7.9	20	105	-.01
Ethyl methacrylate	0.218	0.214	-	1.8	20	102	0
1,1,2-Trichloroethane	0.168	0.192*	-	-14.3	20	108	0
Chlorodibromomethane	0.248	0.266	-	-7.3	20	105	0
1,3-Dichloropropane	0.365	0.421	-	-15.3	20	111	-.01
1,2-Dibromoethane	0.186	0.199*	-	-7	20	105	0
2-Hexanone	0.123	0.119	-	3.3	20	105	0
Chlorobenzene	0.646	0.706	-	-9.3	20	106	0
Ethylbenzene	1.17	1.262	-	-7.9	20	104	-.01
1,1,1,2-Tetrachloroethane	0.259	0.279	-	-7.7	20	105	0
p/m Xylene	0.427	0.471	-	-10.3	20	107	0
o Xylene	0.41	0.449	-	-9.5	20	103	0
Styrene	20	21.471	-	-7.4	20	109	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	104	0
Bromoform	0.27	0.274	-	-1.5	20	103	0
Isopropylbenzene	1.777	1.864	-	-4.9	20	102	-.01
4-Bromofluorobenzene	0.92	0.895	-	2.7	20	103	0
Bromobenzene	0.474	0.505	-	-6.5	20	105	0
n-Propylbenzene	2.21	2.47	-	-11.8	20	107	0
1,4-Dichlorobutane	0.619	0.695	-	-12.3	20	113	0
1,1,2,2-Tetrachloroethane	0.389	0.446	-	-14.7	20	118	0
4-Ethyltoluene	1.793	1.958	-	-9.2	20	105	0
2-Chlorotoluene	1.668	1.853	-	-11.1	20	107	0
1,3,5-Trimethylbenzene	1.598	1.742	-	-9	20	105	-.01
1,2,3-Trichloropropane	0.348	0.384	-	-10.3	20	112	-.01
trans-1,4-Dichloro-2-buten	0.14	0.158	-	-12.9	20	115	-.01
4-Chlorotoluene	1.473	1.645	-	-11.7	20	107	-.01
tert-Butylbenzene	1.284	1.357	-	-5.7	20	103	0
1,2,4-Trimethylbenzene	1.656	1.718	-	-3.7	20	105	0
sec-Butylbenzene	1.791	2.018	-	-12.7	20	107	0
p-Isopropyltoluene	10	9.94	-	0.6	20	106	-.01
1,3-Dichlorobenzene	0.915	0.994	-	-8.6	20	106	0
1,4-Dichlorobenzene	0.937	1.014	-	-8.2	20	106	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: GEI Consultants		**Lab Number**	: L2366389	
Project Name	: TUFTS STREET		**Project Number**	: 045163	
Instrument ID	: QUIMBY		**Calibration Date**	: 11/17/23 03:13	
Lab File ID	: VQ231117A01		**Init. Calib. Date(s)**	: 11/14/23	11/14/23
Sample No	: WG1853609-2		**Init. Calib. Times**	: 05:41	08:21
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.017	1.004	-	1.3	20	107	0
n-Butylbenzene	10	10.201	-	-2	20	110	-.01
1,2-Dichlorobenzene	0.875	0.954	-	-9	20	107	-.01
1,2,4,5-Tetramethylbenzene	1.621	1.543	-	4.8	20	103	0
1,2-Dibromo-3-chloropropan	0.064	0.061	-	4.7	20	103	0
1,3,5-Trichlorobenzene	0.701	0.739	-	-5.4	20	106	0
Hexachlorobutadiene	0.248	0.251	-	-1.2	20	110	-.01
1,2,4-Trichlorobenzene	0.663	0.604	-	8.9	20	104	0
Naphthalene	10	8.566	-	14.3	20	98	0
1,2,3-Trichlorobenzene	0.577	0.593	-	-2.8	20	105	0

* Value outside of QC limits.

Appendix E

Pre-Sampling Checklists and Air Sampling Checklists

GEI Consultants

AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (3 Bedroom Unit)

Sample ID: 045163-31TUFT-IA1

Date: 10/16/23
Sampling personnel: J. Smalley, A. Bilas
Summa Canister ID: 2629
Flow Regulator ID: 02077
Sample Type / Analysis Method: TO15/Summa
Sampling Start Time: 08:46 (10/16/2023)
Sampling Finish Time: 08:35 (10/17/2023)

	During Sampling	
	Time	Vacuum
7/5/2023	8:46	-29.66
7/6/2023	8:35	-9.63

Did Summa canister go to ambient pressure? No
Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): **Flow Controller:** -29.66 in. Hg (0.00 before opening)
Pressure gauge reading (After sample collected): **Flow Controller:** -9.63 in. Hg (at end)

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	~56	~52
Barometric Pressure (in. Hg):	29.48	29.85
Prevailing Wind Direction:	NNW	NNW
General Weather Conditions:	light rain, cloudy	P. Cloudy

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	~62	~62
Barometric Pressure (in. Hg):	29.48	29.85

PID readings at sample location (ppm): 0.1

Photographs taken before sampling? Yes / No **If Yes, what time:** **Taken by:**
Photographs taken after sampling? Yes / No **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? Yes **If yes, how long?** Upon arrival, doors were open
Windows open? Yes **Ventilation fans?** No
Was there significant precipitation within 12 hours of (or during) the sampling event? Yes
Were any of the residents home during sampling? NA **If yes, provide detail:** construction site
Did any of the occupants NOT follow instruction for residents? NA **If yes, describe below:**

Air intake at ~6'6".
Basement Ceiling Height (to joists): Front ~10' **; Back**_____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):
- Painters working on first floor

GEI Consultants

AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Unit 101)

Sample ID: 045163-31TUFT-IA2

Date: 10/16/23
Sampling personnel: J. Smalley, A. Bilas
Summa Canister ID: 2632
Flow Regulator ID: 01399
Sample Type / Analysis Method: TO15/Summa
Sampling Start Time: 08:58 (10/16/2023)
Sampling Finish Time: 08:50 (10/17/2023)

	During Sampling	
	Time	**Vacuum**
7/5/2023	8:58	-29.67
7/6/2023	8:50	-8.32

Did Summa canister go to ambient pressure? No
Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): **Flow Controller:** -29.67 in. Hg (0.00 before opening)
Pressure gauge reading (After sample collected): **Flow Controller:** -8.32 in. Hg (at end)

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	~56	~52
Barometric Pressure (in. Hg):	29.48	29.85
Prevailing Wind Direction:	NNW	NNW
General Weather Conditions:	light rain, cloudy	P. Cloudy

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	~62	~62
Barometric Pressure (in. Hg):	29.48	29.85

PID readings at sample location (ppm): 0.6

Photographs taken before sampling? Yes / No **If Yes, what time:** **Taken by:**
Photographs taken after sampling? Yes / No **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? Yes **If yes, how long?** Upon arrival, doors were open
Windows open? Yes **Ventilation fans?** No
Was there significant precipitation within 12 hours of (or during) the sampling event? Yes
Were any of the residents home during sampling? NA **If yes, provide detail:** construction site
Did any of the occupants NOT follow instruction for residents? NA **If yes, describe below:**

Air intake at ~4'7".
Basement Ceiling Height (to joists): Front ~10' **; Back**_____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

GEI Consultants

AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Utility Closet)

Sample ID: 045163-31TUFT-IA3

Date: 10/16/23
Sampling personnel: J. Smalley, A. Bilas
Summa Canister ID: 588
Flow Regulator ID: 01304
Sample Type / Analysis Method: TO15/Summa
Sampling Start Time: 08:52 (10/16/2023)
Sampling Finish Time: 08:40 (10/17/2023)

	During Sampling	
	Time	**Vacuum**
7/5/2023	8:52	-29.83
7/6/2023	8:40	-9.00

Did Summa canister go to ambient pressure? No
Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): **Flow Controller:** -29.83 in. Hg (0.00 before opening)
Pressure gauge reading (After sample collected): **Flow Controller:** -9.00 in. Hg (at end)

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	~56	~52
Barometric Pressure (in. Hg):	29.48	29.85
Prevailing Wind Direction:	NNW	NNW
General Weather Conditions:	light rain, cloudy	P. Cloudy

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	~62	~62
Barometric Pressure (in. Hg):	29.48	29.85

PID readings at sample location (ppm): 0.2

Photographs taken before sampling? Yes / No **If Yes, what time:** **Taken by:**
Photographs taken after sampling? Yes / No **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? Yes **If yes, how long?** Upon arrival, doors were open
Windows open? NA **Ventilation fans?** No
Was there significant precipitation within 12 hours of (or during) the sampling event? Yes
Were any of the residents home during sampling? NA **If yes, provide detail:** construction site
Did any of the occupants NOT follow instruction for residents? NA **If yes, describe below:**

Air intake at ~4'10".
Basement Ceiling Height (to joists): Front ~10' **; Back**_____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

SUB-SLAB MONITORING POINT INSTALLATION LOG

GEI Consultants

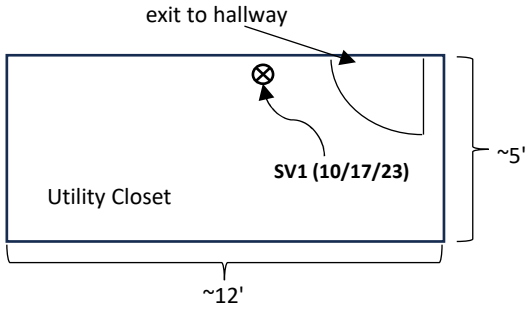
Sub-Slab Monitoring Point IDs:

SV1

Project Name: 31 Tufts St
Project Number: 045163
Address: 31 Tufts St, Somerville, MA
Date: 10/17/23
Logged By: J. Smalley

Basement Sketch: (ground floor, in utility room)

Ceiling Height: ~8'
Basement Height Above Grade: NA

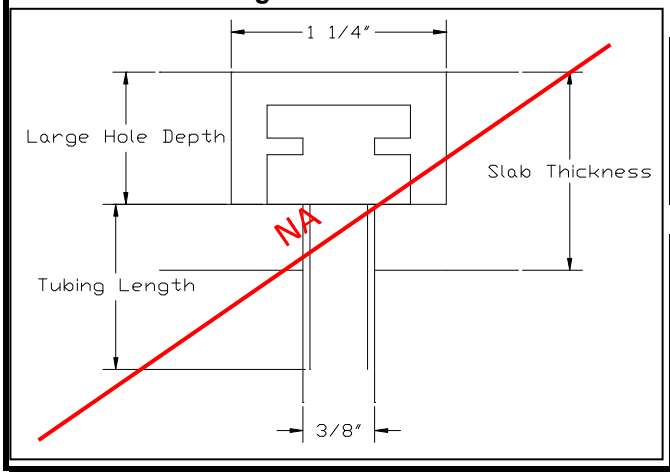


Include: Wall lengths, sump dimension and location, dimensions and locations of any significant penetrations in the ground, sub-slab monitoring point locations, location of sealed vs. non-sealed walls, north arrow

Basement Sketch for Photo Log:

NA

Sub-Slab Monitoring Point Profile:



	SV2			
Slab Thickness:	10"			
Tubing Length:	NA			
Type of Material Under Slab:				
Large Hole Depth:	1.75"			

Comments:
- installed stainless steel VaporPin in point
- NA = not applicable

SUB-SLAB MONITORING POINT INSTALLATION LOG

GEI Consultants

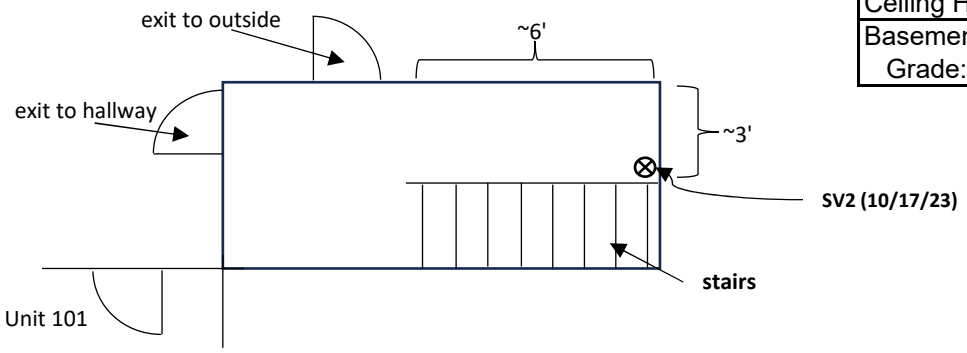
Sub-Slab Monitoring Point IDs:

SV2

Project Name:	31 Tufts St
Project Number:	045163
Address:	31 Tufts St, Somerville, MA
Date:	10/17/23
Logged By:	J. Smalley

Basement Sketch: (ground floor, in stairwell by unit 101 [exit stair 2])

Ceiling Height:	~10' to ~5'
Basement Height Above Grade:	NA

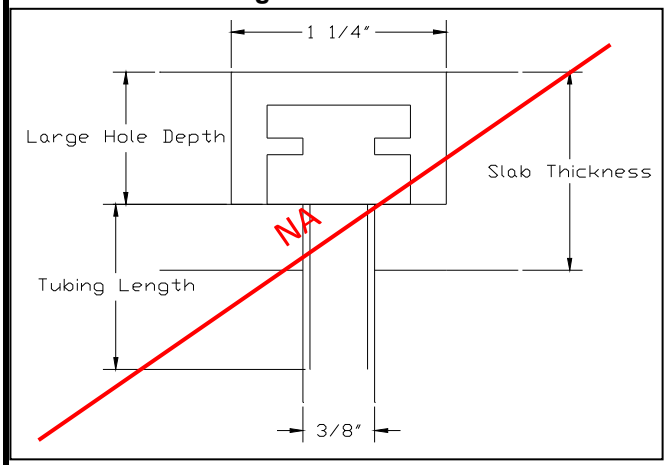


Include: Wall lengths, sump dimension and location, dimensions and locations of any significant penetrations in the ground, sub-slab monitoring point locations, location of sealed vs. non-sealed walls, north arrow

Basement Sketch for Photo Log:

NA

Sub-Slab Monitoring Point Profile:



	SV2			
Slab Thickness:	10"			
Tubing Length:	NA			
Type of Material Under Slab:				
Large Hole Depth:	1.75"			

Comments:
- installed stainless steel VaporPin in point
- NA = not applicable

SUB-SLAB MONITORING POINT INSTALLATION LOG

GEI Consultants

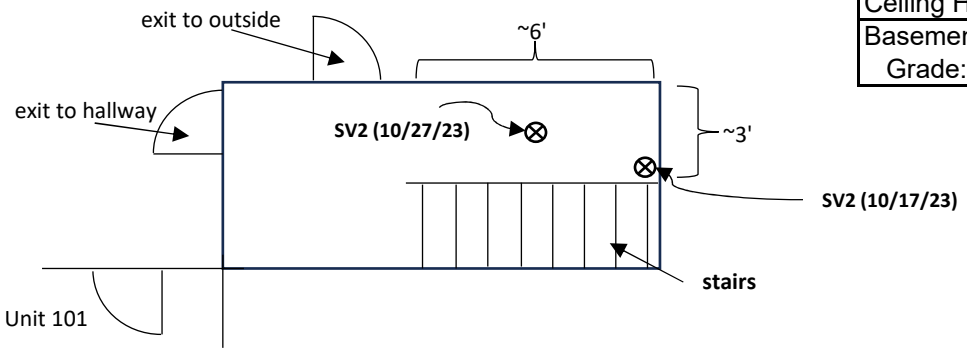
Sub-Slab Monitoring Point IDs:

SV2

Project Name: 31 Tufts St
Project Number: 045163
Address: 31 Tufts St, Somerville, MA
Date: 10/27/23
Logged By: D. Miller

Basement Sketch: (ground floor, in stairwell by unit 101 [exit stair 2])

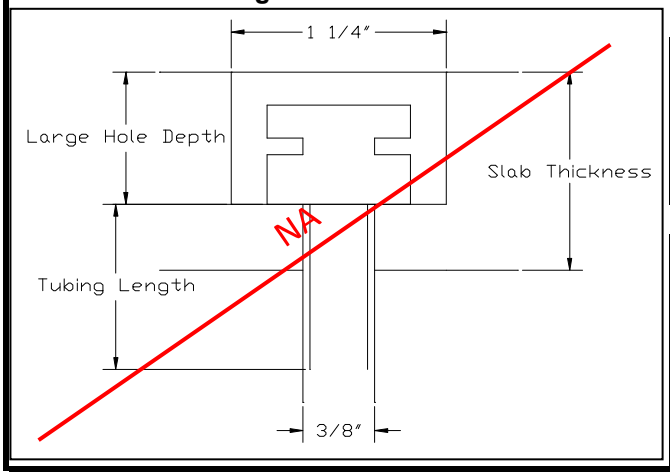
Ceiling Height: ~10' to ~5'
Basement Height Above Grade: NA



Include: Wall lengths, sump dimension and location, dimensions and locations of any significant penetrations in the ground, sub-slab monitoring point locations, location of sealed vs. non-sealed walls, north arrow

Basement Sketch for Photo Log:
NA

Sub-Slab Monitoring Point Profile:



	SV2			
Slab Thickness:	10"			
Tubing Length:	NA			
Type of Material Under Slab:	gravel			
Large Hole Depth:	1.75"			

Comments:
- installed stainless steel VaporPin in point
- did not observe soil on drill bit; assume gravel (from vapor barrior system below slab)
- NA = not applicable

GEI Consultants

SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Utility Closet)

Sample ID: 045163-31TUFT-SV1

Date: 10/17/23
Sampling personnel: J. Smalley
Summa Canister ID: 230
Flow Regulator ID: 01547
Sample Type / Analysis Method: SUMMA/TO-15
Sampling Start Time: 12:00
Sampling Finish Time: 13:00

Did Summa Canister go to ambient pressure? No

During Sampling	
Time	**Vacuum**
12:00	-29.98
12:15	-24.02
12:30	-18.43
12:45	-12.47
13:00	-6.53

Pressure gauge reading (Pre-opening): **Flow Controller:** 0.00 --> -29.98 in.Hg
Pressure gauge reading (After sample collected): **Flow Controller:** --6.53 --> 0.00 in.Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature:	57°F	57°F
Barometric Pressure:	29.85 inHg	29.85 inHg
Prevailing Wind Direction:	NNW	NNW
General Weather Conditions:	P. Cloudy	P. Cloudy

Photographs taken before sampling? Yes / No **If Yes, what time:** **Taken by:**
Vacuum prior to sampling (in. WC):
Ambient air concentration (ppm): 0.0
Soil gas concentration prior to sampling (ppm): 0.0
Vapor point purged for ~5 min **with a MiniRAE 3000 (500-600 cc/min) prior to sampling.**

Comments:
- Sample point installed on 10/17/23

GEI Consultants

SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (stairwell 2)

Sample ID: 045163-31TUFT-SV2

Date: 10/17/23
Sampling personnel: J. Smalley
Summa Canister ID: 3924
Flow Regulator ID: 02370
Sample Type / Analysis Method: SUMMA/TO-15
Sampling Start Time: 12:05
Sampling Finish Time: 13:05

Did Summa Canister go to ambient pressure? No

During Sampling	
Time	**Vacuum**
12:05	-29.96
12:20	-28.38
12:35	-27.03
12:50	-25.59
13:05	-24.19

Pressure gauge reading (Pre-opening): **Flow Controller:** 0.00 --> -29.96 in.Hg
Pressure gauge reading (After sample collected): **Flow Controller:** -24.19 --> 0.00 in.Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature:	57°F	57°F
Barometric Pressure:	29.85 inHg	29.85 inHg
Prevailing Wind Direction:	NNW	NNW
General Weather Conditions:	P. Cloudy	P. Cloudy

Photographs taken before sampling? Yes / No **If Yes, what time:** **Taken by:**
Vacuum prior to sampling (in. WC):
Ambient air concentration (ppm): 0.0
Soil gas concentration prior to sampling (ppm): 0.0
Vapor point purged for ~5 min **with a MiniRAE 3000 (500-600 cc/min) prior to sampling.**

Comments:
- Sample point installed on 10/17/23
- Sample not submitted; appears that flow path between canister and soil gas is blocked and minimal to no flow occured
- point will be reinstalled and sampled at a future date

GEI Consultants

SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (stairwell 2)

Sample ID: 045163-31TUFT-SV2

Date: 10/27/23

Sampling personnel: D. Miller

Summa Canister ID: 3198

Flow Regulator ID: 0877

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 11:00

Sampling Finish Time: 12:00

Did Summa Canister go to ambient pressure? No

During Sampling	
Time	**Vacuum**
11:00	-30.07
11:15	-24.03
11:30	-17.43
11:45	-9.94
12:00	-3.45

Pressure gauge reading (Pre-opening): **Flow Controller:** 0.00 --> -30.07 in.Hg

Pressure gauge reading (After sample collected): **Flow Controller:** -3.45 --> 0.00 in.Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature:	70°F	70°F
Barometric Pressure:	30.06 inHg	30.06 inHg
Prevailing Wind Direction:	W	W
General Weather Conditions:	P. Cloudy	P. Cloudy

Photographs taken before sampling? Yes **If Yes, what time:** 11:00 **Taken by:** DJM

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 2.5 to 3.1

Soil gas concentration prior to sampling (ppm): 1.8

Vapor point purged for ~5 min **with a MiniRAE 3000 (500-600 cc/min) prior to sampling.**

Comments:

- active construction ongoing in and outside of the building, including painting (did not take place directly in stairwell where sampling occurred during sampling)
- sampled from newly installed SV vaporpin point, which was installed on 10/27/23 in the center of exit stair 2 area

31 Tufts Street

Somerville, Massachusetts

Soil Vapor Install and Sampling – Photo Log

October 17 & 27, 2023

SV1, 10/17/23

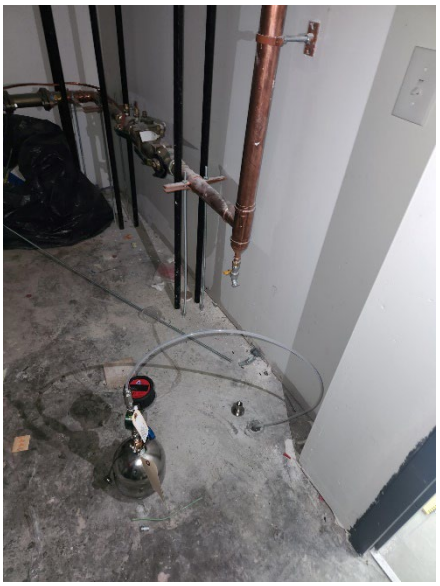


Photo 1. SV1 in utility closet.

Reinstallation of SV2, 10/27/23

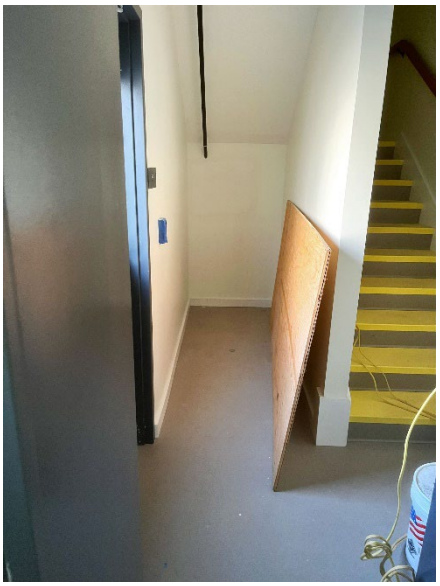


Photo 2. Exit Stairwell 2

Photo 3. Initial and reinstalled SV2

Photo 4. VaporPin sample point

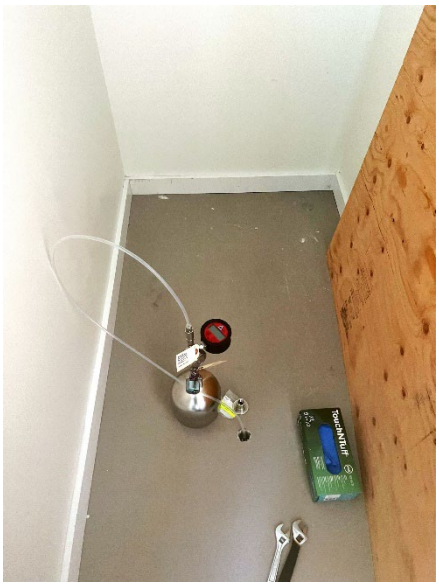


Photo 5. Collecting sample

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PRE-SAMPLING FIELD CHECKLIST FOR INDOOR AIR SAMPLING

Survey Completed by: D. Miller Date: 7/5/23

Site Name: 103 Wash (Tufts St 045763) Case #: _____

Part I - Occupants

Building Address: 103 Washington St Somerville, MA

Property Contact: _____ Owner / Renter / other: _____

Contact's Phone: home ( )_____ work ( )_____ cell ( )_____

Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults _____

Part II – Building Characteristics

Building type: single-family residential / (multi-family residential) / office / strip mall / (commercial) / industrial → apartments, 3 floors

Describe building: apartments

Number of floors - below grade: 1 (full basement / crawl space / slab) at or above grade: 3

Basement size: _____ ft^2 Basement floor: (concrete) / dirt / floating / other (specify): _____

Foundation type: finished basement / full basement / partial basement / crawl space / slab on grade

Foundation materials: (poured concrete) / cinder blocks / stone / other (specify) _____

Foundation integrity: (no crack or open joints) / moderate cracks or open joints / many cracks or open joints

Basement / slab floor: (concrete; good integrity) / concrete with cracks / earthen floor / carpet or flooring

Basement use: (storage; infrequent use) / recreation or living space / bedrooms / other (specify) utilities
↳ during work / electrical work occurs

Type of ground cover around outside of building: grass / concrete / (asphalt) / other (specify) sidewalks/road

Moisture conditions in basement: wet / damp / (dry) / other (specify)_____

Basement sump present? (*Yes*/*No*) Sump pump? (*Yes*/*No*) Standing water in sump? (*Yes*/*No*) Product in sump? *Yes*/(*No*)

Type of heating system (circle all that apply):

hot air circulation	hot air radiation	wood	steam radiation	hot water radiation
kerosene heater	electric baseboard	heat pump	other (specify):	

Type of ventilation system (circle all that apply):

central air conditioning	mechanical fans	bathroom ventilation fans
individual air conditioning units	kitchen range hood fan	other (specify):

Type of fuel utilized (circle all that apply):

Natural gas / electric / fuel oil / wood / coal / solar / kerosene / outside (fresh) air intake

Septic system? *Yes / Yes (but not used) / No* Irrigation/private well? *Yes / Yes (but not used) / No*

Building address: _____

Existing subsurface depressurization (radon) system in place? *Yes / No* and running? *Yes / No*
Has the building been weatherized with any of the following:
insulation / storm windows / energy efficient windows Other (specify): _____

Comments:

Part III - Outside Contaminant Sources

MADEP Comprehensive Site List (1000-ft. radius): _____

Other stationary sources nearby (gas stations, emission stacks, etc.): _____

Heavy vehicular traffic nearby (or other mobile sources): yes, busy road

Part IV – Indoor Contaminant Sources – *Use additional sheets if necessary*

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor & room), and whether the item was removed from the building 48 hours prior to indoor air sampling event.

Potential Sources	Location(s)	Removed Prior to Sampling? (Yes / No / NA)
Gasoline storage cans	acrylic paints, joint compounds, waterproofing, caulking,	
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers	Yes, basement - 11 x 5gal, 8 paintcans	no
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)	If Yes is, is there an odor near tank? *None / weak / strong*	NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Recent painting in building?		NA
Hobbies - glues, paints, etc.		

~~otha~~ → carpet shield items No

Building address: _____

Part V – PID Screening - ***Use additional sheets if necessary***

PID screening of annular space around utility pipes through basement wall / floor? *Yes / no / not accessible*

PID screening of cracks in wall/ floor and/or wall/floor interface: *Yes / no / not accessible / no cracks*

PID screening above space above drain sump? *Not applicable* / (Yes) / *no / not accessible* 0.7

Results of screening / comments :

basement ambient = 1.3 ppmV

vents " 0.6-0.9 ppmV

Part V – Miscellaneous Items - ***Use additional sheets if necessary***

Do any occupants of the building smoke? *Yes / No* How often? _____

Has anyone smoked within the building within the last 48 hours? *Yes / No*

Does the building have an attached garage? *Yes / No*

If so, is a car usually parked in the garage? *Yes / No*

Do the occupants of the building have their clothes dry-cleaned? *Yes / No*

When were dry-cleaned clothes last brought into the building? _____

Have the occupants ever noticed any unusual odors in the building? *Yes / No*

Describe (with location): _____

Any known spills of a chemical immediately outside or inside the building? *Yes / No*

Describe (with location): _____

Have any pesticides/herbicides been applied around the building foundation or in the yard/gardens? *Yes* / No

If so, when and which chemicals? _____

What is the quantity of goods in the basement? As in, if we were to temporarily store all of the goods from the basement, approximately how large of an area would we need? _____

GEI Consultants

AMBIENT AIR SAMPLING CHECKLIST

Sampling Location: 103 WASHINGTON

Sample ID: 045163-103Wash-B1

Date: 7/5/2023

Sampling personnel: D. Miller

Summa Canister ID: 3482

Flow Regulator ID: 0416

Sample Type / Analysis Method: TO15/Summa

Sampling Start Time: 10:25 (7/5/2023)

Sampling Finish Time: 10:25 (7/6/2023)

During Sampling		
	Time	Vacuum
7/5/2023	10:25	-30.53
	10:40	-30.24
7/6/2023	9:30	-10.83
	10:01	-10.38
	10:25	-10

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: --- (Initial = -29.6 in. Hg)

Pressure gauge reading (Pre-opening): Flow Controller: -30.53 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -10 in. Hg (at end)

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	~80	~85
Barometric Pressure (in. Hg):	29.97	29.94
Prevailing Wind Direction:	4 mph out of NW	3 mph out of S
General Weather Conditions:	Sunny	Sunny

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	~68	~68
Barometric Pressure (in. Hg):	29.95	29.94

PID readings at sample location (ppb): ~1.3 ppmV ambient in basement

Photographs taken before sampling? Yes **If Yes, what time:** 10:15 **Taken by:** DJM

Photographs taken after sampling? Yes **If Yes, what time:** 10:30 **Taken by:** DJM

Was the building aired out prior to sample collection? Yes **If yes, how long?** Upon arrival, doors were open to outside/basement.

Windows open? NA **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes (rain on 7/4/2023)

Were any of the residents home during sampling? NA **If yes, provide detail:** NA

Did any of the occupants NOT follow instruction for residents? NA **If yes, describe below:**

Air intake at ~4'.

Basement Ceiling Height (to joists): Front ~8' **; Back**_____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

-Doors to outside (basement stairwell) and to basement were propped open upon arrival (had been open for ~2 hrs per workers).

-Closed basement door (but door to outside at top staircase remained propped open for workers). Handle missing in basement door, stuffed w/ paper and covered to prevent air flow

-Note storage of ~13 x 5 gal buckets of acrylic paints/sealant compounds in basement, and 8 paint cans, along with various electrical trash.

-Sump present and one pipe dripping consistently. (Open to air)

GEI Consultants

AMBIENT AIR SAMPLING CHECKLIST

Sampling Location: 103 WASHINGTON

Sample ID: 045163-103Wash-F1

Date: 7/5/2023

Sampling personnel: D. Miller

Summa Canister ID: 3943

Flow Regulator ID: 0234

Sample Type / Analysis Method: TO15/Summa

Sampling Start Time: 10:30 (7/5/2023)

Sampling Finish Time: 10:30 (7/6/2023)

During Sampling		
	Time	**Vacuum**
7/5/2023	10:30	-29.94
7/6/2023	9:33	-9.62
	10:00	-9.17
	10:30	-8.69

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: --- (Initial reported = -29.6 in. Hg)

Pressure gauge reading (Pre-opening): Flow Controller: -29.94 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -8.69 in. Hg (at end)

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature (°F):	~80	~85
Barometric Pressure (in. Hg):	29.97	29.94
Prevailing Wind Direction:	4 mph out of NW	3 mph out of S
General Weather Conditions:	Sunny	Sunny

Environmental Conditions (At Sample Location):	**Before Sampling**	**After Sampling**
Temperature (°F):	~82	~82
Barometric Pressure (in. Hg):	29.95	29.94

PID readings at sample location (ppb): 0.6-0.9 ppmV before sampling

Photographs taken before sampling? Yes **If Yes, what time:** 10:05 **Taken by:** DJM

Photographs taken after sampling? Yes / No **If Yes, what time:** _____ **Taken by:** _____

Was the building aired out prior to sample collection? Yes **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? Yes (rain on day 7/4/2023)

Were any of the residents home during sampling? NA **If yes, provide detail:** NA

Did any of the occupants NOT follow instruction for residents? NA **If yes, describe below:**

Air intake at ~4'.

Basement Ceiling Height (to joists): Front ~10' **; Back**_____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

-Front (retail) space. Floors still plywood, dust/paint splatter/drywall

-Material settled on floor, slight drywall odor/fresh wood odor.

GEI Consultants

SUB-SLAB SAMPLING CHECKLIST

Sampling Location: 103 WASHINGTON

Sample ID: 045163-103Wash-SV1

Date: 7/6/2023

Sampling personnel: D. Miller, N. Troccolo

Summa Canister ID: 3443

Flow Regulator ID: 01764

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 11:13

Sampling Finish Time: 12:13

Did Summa Canister go to ambient pressure? No

During Sampling	
Time	**Vacuum**
11:13	-29.68
11:28	-23.13
11:43	-15.91
11:58	-8.51
12:13	-1.60

Pressure gauge reading (Pre-opening): **Flow Controller:** 0.00 in.Hg (-29.68 upon opening)

Pressure gauge reading (After sample collected): **Flow Controller:** -1.60 in.Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature:	~89 °F	~89 °F
Barometric Pressure:	29.94 in Hg	29.94 in Hg
Prevailing Wind Direction:	3 mph out of S	3 mph out of S
General Weather Conditions:	Sunny, modestly humid	Sunny, modestly humid

Photographs taken before sampling? Yes **If Yes, what time:** 11:13 **Taken by:** DJM

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppb): 1.3 to 1.6 ppmV

Soil gas concentration prior to sampling (ppm): 0.1 ppmv

Vapor point purged for ~5 min **with a MiniRAE (500-600 cc/min) prior to sampling.**

Comments:

GEI Consultants

SUB-SLAB SAMPLING CHECKLIST

Sampling Location: 103 WASHINGTON

Sample ID: 045163-103Wash-SV2

Date: 7/6/2023

Sampling personnel: D. Miller, N. Troccolo

Summa Canister ID: 2186

Flow Regulator ID: 02174

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 11:15

Sampling Finish Time: 12:15

Did Summa Canister go to ambient pressure? No

During Sampling	
Time	**Vacuum**
11:15	-29.65
11:30	-23.92
11:45	-17.14
12:00	-10.47
12:15	-3.92

Pressure gauge reading (Pre-opening): **Flow Controller:** 0.00 in.Hg (-29.65 upon opening)

Pressure gauge reading (After sample collected): **Flow Controller:** -3.92 in.Hg

Environmental Conditions (Outside):	**Before Sampling**	**After Sampling**
Temperature:	~89 °F	~89 °F
Barometric Pressure:	29.94 in Hg	29.94 in Hg
Prevailing Wind Direction:	3 mph out of S	3 mph out of S
General Weather Conditions:	Sunny, modestly humid	Sunny, modestly humid

Photographs taken before sampling? Yes **If Yes, what time:** 11:15 **Taken by:** DJM

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppb): 1.3 to 1.8 ppmV

Soil gas concentration prior to sampling (ppm): 0.1 ppmv

Vapor point purged for ~5 min **with a MiniRAE (500-600 cc/min) prior to sampling.**

Comments:

103 Washington Street

Somerville, Massachusetts

Indoor Air and Soil Vapor Sampling – Photo Log

July 5-6, 2023

Indoor Air

First Floor, Retail Space (103Wash-F1)

Photo 1. Wash. St. on right

Photo 2. Sample F1

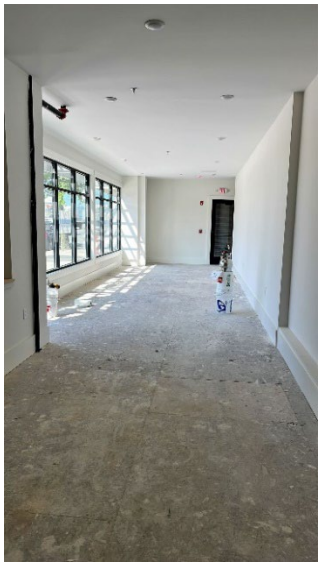

Photo 3. Wash. St. on left

Basement (103Wash-B1)

Photo 5. Sample B1

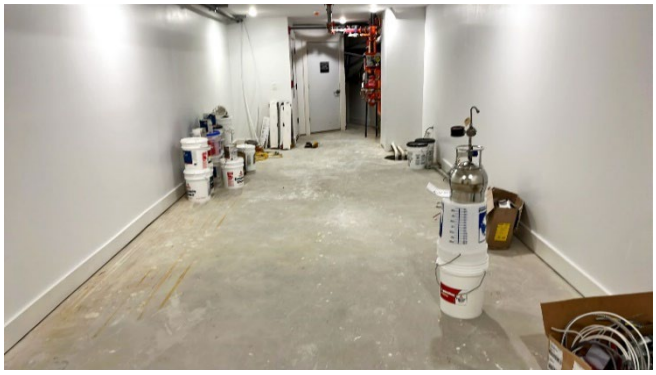

Photo 6. Basement, looking towards stairwell

Photo 7. Sump in basement

Photo 8. Paint/epoxy materials in basement during sampling

Soil Vapor

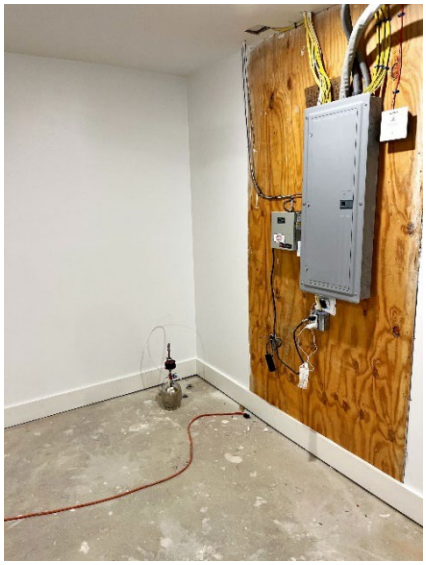

Photo 9. SV1

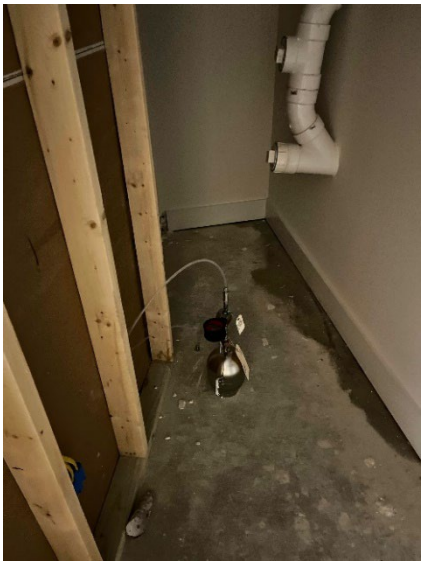

Photo 10. SV2

Appendix F

Field Monitoring Forms

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	J. Farr	**Monitoring Start Time:**	1:00 PM
	N. Troccolo	**Monitoring End Time:**	1:45 PM
Date:	07/28/23		
Weather:	90's, sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.1 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemometer (CFM)	Reed	R4500SD	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration	
Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	NM
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements		
Monitoring Point	**Pressure (in. H_2O)**	**VOC (ppm)**
West Header	-2.90	1.9
Center Header	-2.91	3.8
East Header	-2.95	1.6
North Header	-2.93	4.4
South Header	-3.06	14.7
Combined System Influent	-6.70	2.5
Blower Effluent	NM	3.5
Lead Carbon Effluent	17.94	0.0
Secondary Carbon Effluent	1.45	0.0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0.0
Blower Filter Inlet	NM	
Blower Filter Outlet	NM	

System Flow Rate Data	
Velocity (ft/min)	**System Flowrate (CFM):**
5602	489

Tank Exterior Monitoring	
Bubbling Paint Visible?	
Tank	**Y/N**
A	Yes
B	Yes
C	Yes
Rust Visible?	
Tank	**Y/N**
A	Yes
B	Yes
C	Yes

ABBREVIATIONS

ppm = parts per million
CFM = cubic feet per minute
ft/min = feet per minute
PID = photoionization detector
N/A = Not Applicable
VOC = volatile organic compound
in. H2O = inches of water column
NM = Not Measured
VFD = Variable Frequency Drive

COMMENTS

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccolo	**Monitoring Start Time:**	10:50 AM
	M. Forrest	**Monitoring End Time:**	11:15 AM
Date:	08/17/23		
Weather:	70's, cloudy		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.2 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemometer (CFM)	Reed	R4500SD	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	NM
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	NM	NM
Center Header	NM	NM
East Header	NM	NM
North Header	NM	NM
South Header	NM	NM
Combined System Influent	NM	2.0
Blower Effluent	NM	2.0
Lead Carbon Effluent	NM	0.0
Secondary Carbon Effluent	NM	0.0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0.0
Blower Filter Inlet	NM	
Blower Filter Outlet	NM	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
NM	NM

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS

ppm = parts per million
CFM = cubic feet per minute
ft/min = feet per minute
PID = photoionization detector
N/A = Not Applicable
VOC = volatile organic compound
in. H2O = inches of water column
NM = Not Measured
VFD = Variable Frequency Drive

COMMENTS

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccolo	**Monitoring Start Time:**	9:10 AM
		Monitoring End Time:	10:00 AM
Date:	09/15/23		
Weather:	60's, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.0 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemometer (CFM)	Reed	R4500SD	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	NM
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	NM	NM
Center Header	NM	NM
East Header	NM	NM
North Header	NM	NM
South Header	NM	NM
Combined System Influent	NM	3.1
Blower Effluent	NM	5.3
Lead Carbon Effluent	NM	0.0
Secondary Carbon Effluent	NM	0.0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0.0
Blower Filter Inlet	NM	
Blower Filter Outlet	NM	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
NM	NM

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS

ppm = parts per million
CFM = cubic feet per minute
ft/min = feet per minute
PID = photoionization detector
N/A = Not Applicable
VOC = volatile organic compound
in. H2O = inches of water column
NM = Not Measured
VFD = Variable Frequency Drive

COMMENTS

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccolo	**Monitoring Start Time:**	12:50 PM
	D. Miller	**Monitoring End Time:**	13:50 PM
Date:	10/12/23		
Weather:	60's, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.2 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemometer (CFM)	Reed	R4500SD	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	NM
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	-2.32	1.4
Center Header	-2.17	2.4
East Header	-2.30	1.1
North Header	-2.29	1.6
South Header	-2.43	13.5
Combined System Influent	-6.31	2.0
Blower Effluent	30.20	2.3
Lead Carbon Effluent	17.47	0.0
Secondary Carbon Effluent	1.52	0.0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0.0
Blower Filter Inlet	NM	
Blower Filter Outlet	NM	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
5385	470

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS

ppm = parts per million
CFM = cubic feet per minute
ft/min = feet per minute
PID = photoionization detector
N/A = Not Applicable
VOC = volatile organic compound
in. H2O = inches of water column
NM = Not Measured
VFD = Variable Frequency Drive

COMMENTS

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccolo	**Monitoring Start Time:**	12:45 PM
		Monitoring End Time:	1:30 PM
Date:	11/22/23		
Weather:	50's, Cloudy/Rain		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.2 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemometer (CFM)	Reed	R4500SD	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	NM
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	NM	NM
Center Header	NM	NM
East Header	NM	NM
North Header	NM	NM
South Header	NM	NM
Combined System Influent	NM	1.4
Blower Effluent	NM	1.6
Lead Carbon Effluent	NM	0.0
Secondary Carbon Effluent	NM	0.0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0.0
Blower Filter Inlet	NM	
Blower Filter Outlet	NM	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
NM	NM

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS

ppm = parts per million
CFM = cubic feet per minute
ft/min = feet per minute
PID = photoionization detector
N/A = Not Applicable
VOC = volatile organic compound
in. H2O = inches of water column
NM = Not Measured
VFD = Variable Frequency Drive

COMMENTS

50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	D. Miller	**Monitoring Start Time:**	4:40 PM
		Monitoring End Time:	5:00 PM
Date:	12/13/23		
Weather:	30's, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	**Y** / N 100.0 ppm
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading
Anemometer (CFM)	Reed	R4500SD	N/A	N/A

FIELD MEASUREMENTS & OBSERVATIONS

System Status/Configuration

Fenced Enclosure Secure?	Yes
Blower On?	Yes
Condensate Accumulated?	No
Condensate Drained?	NA
Hour Meter Reading?	NM
Lead Carbon Unit?	A
Secondary Carbon Unit?	B
Polish Carbon Unit?	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements

Monitoring Point	Pressure (in. H_2O)	VOC (ppm)
West Header	NM	NM
Center Header	NM	NM
East Header	NM	NM
North Header	NM	NM
South Header	NM	NM
Combined System Influent	NM	4.5
Blower Effluent	NM	4.6
Lead Carbon Effluent	NM	0.0
Secondary Carbon Effluent	NM	0.0
System Effluent	Effluent is secondary tank - Tank C offline	
Ambient Air		0.0
Blower Filter Inlet	NM	
Blower Filter Outlet	NM	

System Flow Rate Data

Velocity (ft/min)	System Flowrate (CFM):
NM	NM

Tank Exterior Monitoring

Bubbling Paint Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

Rust Visible?

Tank	Y/N
A	Yes
B	Yes
C	Yes

ABBREVIATIONS

ppm = parts per million
CFM = cubic feet per minute
ft/min = feet per minute
PID = photoionization detector
N/A = Not Applicable
VOC = volatile organic compound
in. H2O = inches of water column
NM = Not Measured
VFD = Variable Frequency Drive

COMMENTS

60 Tufts Street
SSDS Field Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	J. Farr	**Monitoring Start Time:**	1:45 PM
	N. Troccolo	**Monitoring End Time:**	2:15 PM
Date:	07/28/23		
Weather:	90°F, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	592-911053	100.0 ppm Isobutylene	**Y** / N Cal. Reading (ppm): 100.1
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? **Y** / N
Anemometer (CFM)	Reed	R4500SD	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration	
Blower Enclosure Secure?	**Y** / N
Blower On?	**Y** / N
Influent Condensate Accumulated?	Y / **N**
Effluent Condensate Accumulated?	Y / **N**
Condensate Drained?	Y / **N**
Hour Meter Reading	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements		
Monitoring Point	**Pressure (in. H_2O)**	**VOC (ppm)**
North Header	NM*	NM*
South Header	NM*	NM*
Combined System Influent	-1.31	0.0
System Effluent	N/A	0.0
Blower Filter Inlet	8	
Blower Filter Outlet	31	
Ambient Air Outside Blower Enclosure		0.0

System Flow Rate Data	
Velocity (feet per minute)	**System Flowrate (CFM): = (PI * r^2) * ft per min**
1905	163

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

60 Tufts Street
SSDS Field Monitoring Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccolo	**Monitoring Start Time:**	2:00 PM
	D. Miller	**Monitoring End Time:**	2:45 PM
Date:	10/12/23		
Weather:	~ Mid 60°F, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	592-911053	100.0 ppm Isobutylene	**Y** / N Cal. Reading (ppm): 100.2
Manometer (in. H_2O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? **Y** / N
Anemometer (CFM)	Reed	R4500SD	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration	
Blower Enclosure Secure?	**Y** / N
Blower On?	**Y** / N
Influent Condensate Accumulated?	Y / **N**
Effluent Condensate Accumulated?	Y / **N**
Condensate Drained?	Y / **N**
Hour Meter Reading	N/A
VFD Setting (Hz)	60

Pressure/VOC Measurements		
Monitoring Point	**Pressure (in. H_2O)**	**VOC (ppm)**
North Header	NM*	NM*
South Header	NM*	NM*
Combined System Influent	-1.34	0.0
System Effluent	N/A	0.0
Blower Filter Inlet	9	
Blower Filter Outlet	31	
Ambient Air Outside Blower Enclosure		0.0

System Flow Rate Data	
Velocity (feet per minute)	**System Flowrate (CFM): = (PI * r^2) * ft per min**
1661	142

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

GENERAL INFORMATION

			Outdoor Monitoring	Indoor Monitoring
GEI Field Representatives:	J. Farr			
	N. Troccolo	Start-time of monitoring work:	2:15 PM	NA
Date:	07/28/23	End-time of monitoring work:	3:30 PM	NA
Weather:	sunny, ~90s ° F			

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppm)	RAE Systems	miniRAE3000	NA	100 ppm Isobutylene	Yes
Manometer (in. H_20)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Reed	R4500SD	N/A	N/A	Zeroed before each reading

OBSERVATIONS AND MEASUREMENTS

ENCLOSURE MEASUREMENTS

Shed Secure? NA

Condensate Accumulated? No

Condensate Drained? No

Influent Flow Rate

Port ID	Flow (cfm)
Manifold 12	4
Manifold 13	103
Manifold 14	108

System Monitoring Points

Port ID	Typical Vacuum Range (in. H_2O)	Vacuum (in. H_2O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)
Manifold 12	-0.300 to -0.500	-0.013	0 to 2000	0.0
Manifold 13	-0.300 to -0.500	-1.318	0 to 2000	0.0
Manifold 14	-0.300 to -0.500	-0.835	0 to 2000	0.0

EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS

Monitoring Point Identification	Status (on/off)	Vacuum (in. H_2O)	VOC Concentration (ppm)
122-1	on	-0.017	0.0
122-2	on	-0.011	0.0
122-3	on	-0.007	0.0
126-1	on	-0.010	0.0
126-2	on	-0.007	0.0
126-3	on	-0.080	0.0
134-1	on	-1.104	0.0
134-2	on	-1.213	0.0
134-3	on	-1.098	0.1
138-1	on	-1.205	0.0
138-2	on	-1.186	0.0
138-3	on	-1.194	0.0
142-1	on	-0.607	0.0
142-2	on	-0.627	0.0
142-3	on	-0.616	0.2
146-1	on	-0.612	0.0
146-2	on	-0.588	0.0
146-3	on	-0.584	0.0

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

INTERIOR MEASUREMENTS

Ambient Air Measurements

Classroom	VOC Concentration (ppm)
122	NM
126	NM
134	NM
138	NM
133	NM
137	NM
142	NM
146	NM

Sub-Slab Monitoring Points

Monitoring Point Identification	Vacuum (in. H_2O)	VOC Concentration (ppm)
Room 122A	NM	NM
Room 126A	NM	NM
Room 133A	NM	NM
Room 137A	NM	NM
Room 142A	NM	NM
Room 146A	NM	NM

COMMENTS

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126.
   Manifold 13 is the manifold pipe for rooms 134 and 138.
   Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft = feet.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.
10. Anemometer not functioning. Influent flow was not measured.

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

GENERAL INFORMATION

			Outdoor Monitoring	Indoor Monitoring
GEI Field Representatives:	N. Troccolo			
	D. Miller	Start-time of monitoring work:	12:00 PM	NA
Date:	10/12/23	End-time of monitoring work:	12:45 PM	NA
Weather:	Sunny, ~60s ° F			

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppm)	RAE Systems	miniRAE3000	NA	100 ppm Isobutylene	Yes
Manometer (in. H_20)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Reed	R4500SD	N/A	N/A	Zeroed before each reading

OBSERVATIONS AND MEASUREMENTS

ENCLOSURE MEASUREMENTS

Shed Secure? NA

Condensate Accumulated? No

Condensate Drained? No

Influent Flow Rate

Port ID	Flow (cfm)
Manifold 12	105
Manifold 13	83
Manifold 14	88

System Monitoring Points

Port ID	Typical Vacuum Range (in. H_2O)	Vacuum (in. H_2O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)
Manifold 12	-0.300 to -0.500	-0.922	0 to 2000	0.0
Manifold 13	-0.300 to -0.500	-1.385	0 to 2000	0.0
Manifold 14	-0.300 to -0.500	-0.824	0 to 2000	0.0

EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS

Monitoring Point Identification	Status (on/off)	Vacuum (in. H_2O)	VOC Concentration (ppm)
122-1	on	-0.636	0.0
122-2	on	-0.708	0.0
122-3	on	-0.699	0.0
126-1	on	-0.689	0.0
126-2	on	-0.544	0.0
126-3	on	-0.588	0.0
134-1	on	-1.187	0.0
134-2	on	-1.278	0.0
134-3	on	-1.188	0.0
138-1	on	-1.311	0.0
138-2	on	-1.274	0.0
138-3	on	-1.191	0.0
142-1	on	-0.581	0.1
142-2	on	-0.595	0.0
142-3	on	-0.560	0.1
146-1	on	-0.567	0.0
146-2	on	-0.530	0.0
146-3	on	-0.546	0.0

Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log

INTERIOR MEASUREMENTS

Ambient Air Measurements

Classroom	VOC Concentration (ppm)
122	NM
126	NM
134	NM
138	NM
133	NM
137	NM
142	NM
146	NM

Sub-Slab Monitoring Points

Monitoring Point Identification	Vacuum (in. H_2O)	VOC Concentration (ppm)
Room 122A	NM	NM
Room 126A	NM	NM
Room 133A	NM	NM
Room 137A	NM	NM
Room 142A	NM	NM
Room 146A	NM	NM

COMMENTS

Notes:

1. Manifold 12 is the manifold pipe for rooms 122 and 126.
   Manifold 13 is the manifold pipe for rooms 134 and 138.
   Manifold 14 is the manifold pipe for rooms 142 and 146.
2. PID = photoionization detector.
3. ppb = parts per billion.
4. ppm = parts per million.
5. in. H_2O = inches of water column.
6. ft = feet.
7. cfm = cubic feet per minute.
8. NA = Not Applicable.
9. NM = Not Measured.
10. Anemometer not functioning. Influent flow was not measured.

Appendix G

EPMM Inspection Forms

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	J. Farr	**Address:**	23 Tufts Street
		Monitoring Start Time:	8:00 AM
Date:	10/20/2023	**Monitoring End Time:**	8:45 AM
Weather:	Partly Cloudy, 60's ° F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909687	100 ppm Isobutylene Time: 07:55	(Y) / N Cal. Reading (ppm): 100.2 ppm
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? (Y) / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	(Y) / N	System Influent Pipe	-3.45	0.0	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	System Influent Pipe (Dwyer Manometer)	-3.472	0.0	
Excessive fan noise?	Y / (N)				
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor				
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

100% of basement floor/walls covered with dry wall and tiles, finished bedrooms.

Ambient Air= 0.1 ppm

Changed node battery; telemetry online now

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller	**Property Address:**	34 Knowlton St
		Monitoring Start Time:	10:00 AM
Date:	10/23/2023	**Monitoring End Time:**	10:15 AM
Weather:	Sunny, ~55°F	**Option 2 or 3:**	2 / (3)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.1

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	good / fair / poor	Not observed.
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor	
Epoxy Condition (cracks, peeling, water damage, etc.)?	(good) / fair / poor	
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)	
Downdraft Prevention Cap Present?	Y / N	Not observed.

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Small slab crack near storage unit #2 and extending from support pole.
2. Some pipes not visible due to storage.
3. Ambient Air = 5.5 - 6.5 ppm (note: ambient air on first floor was also 5.5-6.5 ppm. Appeared to be from odor relating to housework)

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller	**Property Address:**	32 Knowlton Street
		Monitoring Start Time:	9:30 AM
Date:	10/24/23	**Monitoring End Time:**	9:45 AM
Weather:	Sunny, ~50°F	**Option 2 or 3:**	2 / (3)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	(good) / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	(Y) / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Basement is partially finished with some SSDS pipes hidden behind walls. No piping is visible.
2. Exterior piping appeared in good condition. PID Reading: 0.0 ppm
3. Ambient Air = 0.0 ppm
4. One noticeable crack on the basement floor

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller	**Property Address:**	166-168 Glen Street
		Monitoring Start Time:	10:30 AM
Date:	10/24/23	**Monitoring End Time:**	10:45 AM
Weather:	Sunny, ~60°F	**Option 2 or 3:**	2 / (3)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good / (fair) / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	Y / (N)

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Water staining on epoxy on chimney and floor, near furnace.
2. Some cracking in previously repaired areas on floor.
3. Cracks by unit 1 heating furnace, by water heater/laundry/support pole, in unit 1 storage, and at base of stairs to driveway
4. Took photos of cracks and told Martin Kwok (owner unit 1) that epoxy would be re-applied at a later date.
5. Ambient Air = 0.0 - 0.1 ppm.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	D. Miller	**Address:**	13 Morton Street
		Monitoring Start Time:	10:10 AM
Date:	10/24/23	**Monitoring End Time:**	10:30 AM
Weather:	Sunny, 50° F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-911053	100 ppm Isobutylene Time: 09:00 AM	(Y) N Cal. Reading (ppm): 100.0
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? (Y) / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	Y / (N)	System Influent Pipe	NM	0.0	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	System Influent Pipe (Dwyer Manometer)	NM	0.0	
Excessive fan noise?	Y / (N)	SS1	0.000	0.1	Near building column between furnace and back wall; see comment (4.)
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor	Ambient Air	N/A	0.0	
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

1. Noted sump area in back of basement (unclear what covers sump, material crumbles), 0.0 ppm
2. Replaced system fan replaced on 11/10/2023 and changed node battery, now working.
3. Downdraft prevention cap missing
4. SS1 point still filled with dust may have impaired readings; needs to be cleaned out.
5. Observed an area of peeling paint on wall by bulkhead door; concrete here is also worn and in poor condition.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	D. Miller	**Address:**	18 Morton Street
		Monitoring Start Time:	10:55 AM
Date:	10/24/23	**Monitoring End Time:**	11:20 AM
Weather:	Sunny, ~60° F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene Time:	(Y) N Cal. Reading (ppm): 100.0
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? (Y) / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	(Y) / N	System Influent Pipe	-1.2	0.0	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	System Influent Pipe (Dwyer Manometer)	-1.29	0.0	
Excessive fan noise?	Y / (N)	SS1	-0.184	0.2	~6' from system influent pipe, in line with window
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor	SS2	-0.024	0.2	
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor	ambient air	N/A	0.0 - 0.1	
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

1. No downdraft prevention cap present.
2. Replaced node battery on 10/26/2023

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	D. Miller	**Address:**	9 Knowlton Street
		Monitoring Start Time:	4:30 PM
Date:	10/25/23	**Monitoring End Time:**	4:50 PM
Weather:	Cloudy, ~60°F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.0
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series		N/A	Zeroed before each reading? (Y) / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	Y (N)	System Influent Pipe	NM	NM	
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	SS1	0.000	0.0	Near water heater in the center of the basement.
Excessive fan noise?	Y / (N)				
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor				
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. ppm = parts per million.
2. PID = photoionization detector.
3. N/A = Not Applicable.
4. VOC = volatile organic compound.
5. in. H_2O = inches of water column.
6. NM = Not Measured.

COMMENTS:

1. Ambient Air reading = 0.0 - 0.1 ppm.
2. Approximately 1/2 of the basement is used for storage, so it wasn't possible to observe all the slab penetrations.
3. Downdraft prevention cap missing
4. Some cracking in slab and observed exposed soil by sewer pump.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller N. Troccolo	**Property Address:**	11 Morton Street
Date:	10/26/23	**Monitoring Start Time:**	9:30 AM
Weather:	Cloudy, ~60°F	**Monitoring End Time:**	9:50 AM
		Option 2 or 3:	(2) / 3

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.1

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	(good) / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	Y / (N)

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm
2. On walls, in storage 1, minor staining and flaking of epoxy.
3. On floor, by door to finished side of basement, minor cracking of expoy.
4. Owner noted a drainage system was installed in the basement to aleve basement flooding, along with a sump by the system influent pipe.
   - Appears to just have concrete and no epoxy covering the drainage piping.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller	**Property Address:**	91-93 Franklin Street
		Monitoring Start Time:	8:00 AM
Date:	10/27/23	**Monitoring End Time:**	9:30 AM
Weather:	Cloudy, 65° F	**Option 2 or 3:**	2 / (3)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-911053	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good (fair) / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	(Y) / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Brick dust observed on walls and pipes.
2. Some water damage around furnace and spread towards central basement
3. Minor peeling of epoxy layer on some areas of wall by bulkhead door/windows, and by bottom of stairs. 0.0 ppm
4. Ambient Air = 0.0 - 0.1 ppm

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	D. Miller	**Address:**	13 Knowlton Street
	M. Forrest	**Monitoring Start Time:**	12:45 PM
Date:	10/30/2023	**Monitoring End Time:**	1:50 PM
Weather:	Cloudy/Rain, ~50° F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene Time:	**Y** / N Cal. Reading (ppm): 100.0
Manometer (in. H_2O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? **Y** / N

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H_2O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	(Y) / N	SSVS Influent Pipe	-0.6	0.0	-0.63 Dwyer
Exterior Fan Condition (housing, wires, etc)?	(good) / fair / poor	SS1	-0.056	0.2	by water heater
Excessive fan noise?	Y / (N)	SS2	-0.052	0.1	by laundry room door
Interior Extraction Pipe Condition (cracks, damage, etc)?	(good) / fair / poor	Ambient Air	NA	0.0	
Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor				
Leaks Around Slab Penetrations?	Y / (N)				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)				

NOTES:

1. EPMM = Exposure Pathway Mitigation Measure.
2. ppm = parts per million.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H_2O = inches of water column.
7. NM = Not Measured.

COMMENTS:

1. Finished basement, partially demo'd.
2. Bill Zoulias (A-Zoulias Environmental Enterprises) also on site - inspects sump box in basement with M. Forrest.
   - Observed a pump that appeared to be out of working condition, and exposed soil. PID reading = 0.1 ppm. Bill resealed the sump box with epoxy caulking.
3. Replaced node battery

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccolo	**Property Address:**	27 Tufts Street
		Monitoring Start Time:	9:00 AM
Date:	10/31/23	**Monitoring End Time:**	9:30 AM
Weather:	Sunny, 40° F	**Option 2 or 3:**	(1)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909687	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.2

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good / (fair) / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	(Y) / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Water staining near basement stairs and on floor between system pipes and opposite wall.
2. Previously exposed mesh near SSVS piping wall penetration - repairs appear in good condition.
3. Flaking epoxy on stairs (though PID reading near stairs 0.0 ppm). St. Repairs made by M. Sepe appear in good condition.
4. Manometer should be installed during next site visit.
5. Ambient Air = 0.0 ppm
6. Changed node battery, telemetry back online, needs pressure switch.

EPMM Option 1
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccolo	**Property Address:**	17 Knowlton Street
		Monitoring Start Time:	1:00 PM
Date:	11/22/2023	**Monitoring End Time:**	1:15 PM
Weather:	Rain, 51°F	**Option 2 or 3:**	2 / (3)

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	(Y) / N Cal. Reading (ppm): 100.2

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	(good) / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	(good) / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / (N)
Downdraft Prevention Cap Present?	(Y) / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm

Appendix H

Waste Disposal Documentation

MA110450

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MAC 300 011 277	1	(800) 899-4672	007254238 GBF

5. Generator's Name and Mailing Address: ~~50 TUFTS STREET SITE~~ UNIFIRST CORPORATION Attn C. MALAGRIDA
68 JONSPIN ROAD
WILMINGTON, MA 01887
Generator's Phone: (978) 658-8888

Generator's Site Address (if different than mailing address): UNIFIRST CORPORATION
50 TUFTS STREET
SOMERVILLE, MA 02145

6. Transporter 1 Company Name: NRC EAST ENVIRONMENTAL SERVICES, INC. — U.S. EPA ID Number: MAC 300 098 399

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: US ECOLOGY BURLINGTON, INC.
54 AVENUE D
WILLISTON, VT 05495
Facility's Phone: (802) 860-1200
U.S. EPA ID Number: VTR 000 517 052

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous waste, solid, n.o.s., (Perchloroethylene), 9, PGIII, (D039), ERG #171	005	CF	5000	P	D039	U210	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. F234505BUR / Vapor Phase Carbon (79443)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: CATHERINE MALAGRIDA — Signature: C. Malagrida — Month: 7 — Day: 21 — Year: 2023

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Christopher Barnes — Signature — Month: 07 — Day: 21 — Year: 2023

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

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